

JPRS-TEN-94-017
30 June 1994



JPRS Report

Environmental Issues

Environmental Issues

JPRS-TEN-94-017

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REGIONAL AFFAIRS

Roundup of Environmental Reports

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Burkina Faso

Ouagadougou Radiodiffusion Nationale du Burkina Faso Radio in French at 2200 GMT on 2 June reports the Burkinabe head of state's speech on the occasion of a rally on production held in Ouagadougou. The report notes the high priority accorded to the preservation of the environment and the fight against desertification in the president's speech. The president advocated "the planting of 15 million trees" and exhorted the people to "install forest management committees by 30 June."

Cote d'Ivoire

Abidjan FRATERNITE MATIN in French on 1 June says "the very existence" of the nation's ports is threatened due to "increasing erosion resulting from the construction of the Abidjan port and the creation of shantytowns near the San-Pedro port." The report adds: "Indeed, the construction of the Autonomous port of Abidjan and the attendant opening of the Vridi Canal constitute a real threat to the immediate environment. The opening of the canal led to the closing of the Comoe River mouth. The consequence is the diversion of water hyacinths from their natural course, causing them to invade the Ebrie Lagoon." The report continues: "According to experts, the resultant economic losses are enormous for lagoon-related activities, and the environment as a whole is affected. According to the report: 'Studies done by the port of Abidjan, based on topographical and bathymetric data, have shown that erosion is advancing at a speed of 3 meters a year.' The report concludes: 'In the face of this menace, experts insist that there is the need for the effective implementation of measures taken by the authorities; the demarcation of living and other areas; the banning of sand winning on the coast; and the removal of dredging material from erosion-prone areas.'"

Abidjan Radio Cote d'Ivoire Chaîne Nationale-Une Network in French at 0700 GMT on 3 June reports the end of the workshop on the strategic management of the environment. The report states that "the different commissions set up worked very hard to ensure that the workshop's resolutions truly reflect the constant degradation of the environment in Abidjan." The report quoted a City Council official on the reasons for the degradation and solutions envisaged: "The problem is one of sanitation around buildings, pollution, noise, and all polluting activities. A possible solution is to revise the current texts which are outdated and therefore unadapted. The workshop recommended a revision of the texts to adapt them to our way of life, taking our lifestyle into account, so that we can live better than we are presently doing."

Nigeria

Lagos Radio Nigeria Network in English at 0600 GMT on 1 June reports that the administrator of Ondo State, Lieutenant Colonel L. M. Torey, has revoked all forest allocations to individuals and organizations. The report continues: "Col. Torey gave the order in Akure, the Ondo State

capital, when receiving the report of the forest-encroachment committee." According to the report, the administrator evoked indiscriminate felling of trees as one of the reasons for the move.

Sudan

Khartoum SUNA in Arabic at 1020 GMT on 13 June, in a Khartoum-dated item, reports that "a team of the Sudan Survey Department has succeeded in setting aside for preservation 20 forests within an area of 1 million faddan (1 faddan equals 4,200.833 square meters) in the three (?governorates) of the state of Kurdufan situated in western Sudan. The head of the team, which consists of 14 surveyors, said that the team concentrated on the Rashad area of southern Kurdufan which is characterized by thick forests. Parts of the forest areas set aside for preservation also included areas in Umm Ruwabah, Rahad, and al-Sumayh in northern Kurdufan. The official said the team is getting ready to move for work in the al-Nuhud and al-Salam governorates in western Kurdufan. He said that the team is using in the implementation of its programs two types of equipment to define the sites which work directly with satellites. This equipment used by the team in carrying out its work is one of the most modern.

SOUTH AFRICA

Development Project Approved Despite Environmental Pressure

MB0306094294 Johannesburg SAPA in English
0640 GMT 03 Jun 94

[Text] Cape Town Jun 3 SAPA—A controversial 4-million rand tourist development at Cape Point was given the go-ahead by the Regional Services Council (RSC) after a special on-site meeting Thursday. The move was welcomed by Cape Point chief nature conservation officer Mr Howard Langley, but was slammed by green pressure groups. RSC councillors were met at Cape Point Thursday by protesters.

RSC chairman Mr Piet Loubser said the executive committee's decision had been unanimous. "The professional (environmental) people we've had to advise us have done a fine job and the new development will have less impact on the natural environment than the present facilities."

The R4 million development, which could be completed within a year, includes a sunken restaurant below the parking area with rockeries and indigenous plants on its roof, and a funicular rail system to replace the buses to the Cape Point view site.

"Everything humanly possible would be done to ensure there was no damage to the environment," Mr Loubser said.

Protesters bore banners and placards reading "no environmental impact assessment. No public participation. No unilateral decision!", "Our Point, our decision", "Will the people benefit", "1990 proposals—what happened?", "Cape Point is our heritage" and "Cape Point real estate" over-written with "sold".

Tianjin Reports Environment Protection Achievements

SK1406080394 Tianjin TIANJIN RIBAO in Chinese
4 Jun 94 p 2

[Text] The municipality sponsored a briefing according to the provisions set in the "PRC Environment Protection Law" on 3 June, to release a municipal environmental bulletin, where Liu Jinsheng, director of the municipal environment protection bureau, announced: Along with rapid economic growth, the municipality realized stability in the overall quality of urban environment in 1993 and still maintained the high level scored in this regard over the past few years. The rate of urban sewage disposal, of industrial waste water disposal, and of popularizing urban heating supply, were obviously upgraded. The norms of building urban environmental infrastructures as well as the rate of popularizing urban gas supply, of increasing urban vegetation, and of improving garbage disposal, were upgraded in varying degrees.

The 1993 municipal environmental bulletin reveals that the density of urban air pollution, the daily average density of nitraoxide in the year, was 0.07 mg/cubic meter and that of carbon monoxide was 2.57 mg/cubic meter, which was the same for 1992. The daily average density of sulfur dioxide in the year was 0.14 mg/cubic meter, showing a 2.2 percent decrease over 1992. The monthly urban fallout was 13.2 tonnes/square km, a one tonne/square km decrease over 1992, and the best norm scored in this regard over the past few years. The total volume of waste gas and steam was 132.2 billion standard cubic meters, showing a 0.45 percent decrease over 1992. In 1993, the municipality continued to maintain the fine quality of water diverted from the Luan river. Of the 20 norms of keeping the diverted water clean, the rate of achieving the norms was 98.8 percent. The diverted water has been one of the best sources of water enjoyed by large cities throughout the country. The rate of urban sewage disposal reached 26.43 percent to show a six percent increase over 1992. The rate of industrial waste water disposal reached 81 percent, showing a five percent increase over 1992. The two norms mentioned above have been at the advanced level scored by the large cities throughout the country. The average urban noise pollution in 1993 was 59.7 decibels, showing a 1.3 decibel decrease over 1992. The 17.7 square km of new municipal, small, residential districts free from noise pollution were built ahead of the target set in the 1994 plan in this regard. The 1993 volume of solid waste discharged by units throughout the municipality was 4.2 million tonnes. The rate of making use of solid waste in a comprehensive way reached 70.1 percent, basically the same as in 1992, and the rate of conducting comprehensive management over this waste reached 96 percent, showing an increase of six-percentage-points over 1992. The municipal's garbage volume was 1.89 million tonnes and the rate of harm-free garbage disposal reached 50.2 percent, showing a 5.2 percent increase over 1992. The municipal rate of achieving the standards in the auto gas control reached 73.9 percent, showing a slight increase over 1992.

Of the fixed-quota targets in the 21 projects set by the state with regard to the comprehensive management of urban environment, the municipality fully fulfilled the seven targets including the smoke and dust control and industrial waste water disposal. It also made progress in the 12 targets, including the improvement of sources of potable water and the comprehensive management of industrial solid waste. All of these have laid a fine foundation for the municipality to become one of the 10 outstanding cities throughout the country in comprehensive environmental management.

During the briefing, Vice Mayor Wang Dehui delivered a speech in which he put forward the following three demands related to successfully carrying out the current work of environmental protection: It is hoped that the comprehensive management of urban environment will make the obvious upgrade or improvement of the quality of the municipal environment and the function of municipal carriers possible and provide a fine investment environment for the municipal programs of reform, opening up, and economic construction and a fine environment for 12th Asian Table Tennis Event and the 43d World Table Tennis Championships.

Liu Wenfan, vice chairman of the municipal people's congress standing committee, attended the briefing for the release of the municipal environmental bulletin.

Hebei Granted Asian Bank Loan for Environmental Protection

SK1306125894 Shijiazhuang HEBEI RIBAO in Chinese
2 June 94 p 1

[By Chai Fang Jie (2693 2455 2638) and Wang Zhiqiang (3769 1807 1730): "Some \$140 Million is Used for Environmental Protection"]

[Text] The agreement signing ceremony for the People's Bank of China to grant the Asian Development Bank loan to Tangshan and Chengde cities to carry out environmental protection projects was held at Shoudu Hotel in Beijing at 1000 in the morning of 3 June.

The People's Bank of China granted \$140 million of an Asian Development Bank loan to the Tangshan and Chengde city people's governments. Of this sum, Tangshan will take \$85 million and Chengde will take \$55 million. This time, Tangshan will use this Asian Development Bank loan for carrying out a group of projects for improving the city environment, including the gas supply and transmission project of the city gas company, the heating supply project of the city heating company in the central district, and four other projects. Chengde city will use this loan to build the coking gas project. Upon completion, the industrial sector and citizens may replace coal with gas, the daily gas supply may reach 470,000 cubic meters, about 80 percent of citizens may have gas supply, and all the produced metallurgical coke will be supplied to Chengde Iron and Steel Company. Thus, we may have gas supply in these two cities and fundamentally solve the pollution problems in these famous historical and cultural cities.

China Issues 'Biodiversity Action Plan'

OW1306115694 Beijing XINHUA in English
1141 GMT 13 Jun 94

[Text] Beijing, June 13 (XINHUA)—China today unveiled a bio-diversity action plan, to implement the 1992 Rio de Janeiro biological diversity convention, of which China was a signatory.

The plan was drawn up by the State Environment Protection Agency (EPA), the State Planning Commission, the Ministry of Agriculture, the Ministry of Forestry, other ministries and the Chinese Academy of Sciences.

It is the first national bio-diversity protection plan aided by the Global Environment Fund.

Bio-diversity, including animals, plants and micro-organisms, refers to ecosystem diversity, species diversity and genetic diversity.

Xie Zhenhua, director-general of EPA, said that sustainable development is at the core of China's strategy to conserve bio-diversity.

The strategy—a sustainable use of living things and a guarantee of a healthy cycle for the ecosystem—is expected to help create sound material and environmental conditions for a sustainable development of the national economy and the whole society.

He said that China would soon take some specific measures to ensure the fulfilment of the overall bio-diversity protection plan.

China would first decide which places and species need the most urgent protection, set up a monitoring system and information centers on bio-diversity, launch experimental projects to return artificially-bred species to nature, introduce a bio-diversity appraisal system, establish special funds for bio-diversity protection and expand international cooperation in this sphere.

Song Jian, state councillor and minister of the State Science and Technology Commission, noted that currently bio-diversity is seriously endangered by cutting and burning trees on a large scale, improperly reclaiming grasslands and wetlands, over-hunting of wild animals and over-gathering of wild plants, inappropriate use of pesticides, destructive fishing and environmental pollution.

"Bio-diversity has become a priority global environmental issue and the loss of bio-diversity is threatening people's life and development," he warned.

He said China is one of the dozen "mega-diversity" countries in the world. It has some 2,340 kinds of land vertebrates, or 10 percent of the world's total, and more than 300,000 species of flora, which ranks it third in the world.

"In view of these facts, bio-diversity conservation in China is of great international significance," Song stressed.

The Chinese Government has been consistent in its efforts to protect the eco-environment while developing its economy and eliminating poverty, he said.

He added that the newly-launched action plan, a set of guidelines for bio-diversity conservation throughout China, will prove to be of great value in getting the whole of society to conserve the unique, rich and varied bio-diversity of China.

Xie said that the painstaking efforts made by the departments involved have begun to yield results. He recalled that China has since 1956 established more than 760 nature reserves, and the protected area now amounts to 6.8 percent of the country's entire territory.

He also said that China now has 110 botanical gardens, over 40 zoos, 26 breeding centers for endangered animals and more than 230 farms for rare and precious animals.

Today's conference to launch the bio-diversity action plan for China was attended by more than 400 government officials, experts, foreign ambassadors to China and representatives from the U.N. Development Program, the U.N. Environment Program and the World Bank.

Nature Reserve Expands Overseas Cooperation

OW1306033694 Beijing XINHUA in English
0308 GMT 13 Jun 94

[Text] Kunming, June 13 (XINHUA)—The Xishuangbanna Nature Reserve, China's major protection and research center for tropical and sub-tropical plants and animals, has stepped up co-operation with overseas organizations to better protect the precious animal and plant resources.

The nature reserve has been admitted to the international network of biosphere reserves of the United Nations Educational, Scientific and Cultural Organization (UNESCO) along with nine other such reserves in China.

Since 1988, it has co-operated with the worldwide fund for nature to protect wild elephants and study the breeding of insects, and the development of forestry and farming outside the reserve as well as the relationships between tourism and wildlife protection.

Meanwhile, it has started a training class in the management of wild animals in co-operation with experts from the association of wild animal protection of the United States.

Established in 1958 in a remote part of southwest China's Yunnan Province, and known as "the kingdom of plants", the nature reserve is made up of five linked reserves with a total area of 240,000 ha.

Specially designed to protect the local ecosystem of primeval forests, and rare animals and plants, the reserve boasts 4,000 kinds of tropical forest and rain forest. So far, a total of 341 wild plants are cultivated in the reserve, 52 of which are under special protection from the central government.

In addition, 99 wild animals in the reserve are under top protection from the Chinese Government.

Some 150,000 Chinese and foreign tourists, many of them experts and scholars, visited the reserve last year.

China To Prevent Hazardous Materials From Entering Borders

OW1206143294 Beijing XINHUA in English
1420 GMT 12 Jun 94

[Text] Nanjing, June 12 (XINHUA)—Wang Yangzu, deputy director of the State Bureau of Environmental Protection, said that the Chinese Government will take measures to prevent hazardous waste materials from being shipped from overseas into its territory.

Wang expressed the Chinese Government's stance against importing wastes at a conference in Nanjing, capital of Jiangsu Province, Saturday [11 June] to commend Nanjing port for its discovery and return of harmful chemical wastes to Republic of Korea.

On September 25, 1993, two Chinese corporations and some companies of the Republic of Korea had 1,288 tons of harmful chemical wastes shipped to Nanjing port under the label "other fuel oil".

The matter caught the attention of the State Council and through joint efforts of departments involved, on March 5, the wastes were all returned to the port of origin abroad.

Experts noted that in recent years, the cases of transnational transferring of harmful wastes and rubbish were on the increase.

The State Bureau of Environmental Protection and General Administration of Customs are now closely cooperating to prevent pollutants from abroad from being shipped into China.

China is now formulating a law governing solid waste pollution.

World Bank Aids Largest Waste Disposal Landfill Site

OW1006054794 Beijing XINHUA in English
0306 GMT 10 Jun 94

[Text] Beijing, June 10 (XINHUA)—China's largest garbage disposal site has been completed in Changping, a north-eastern outskirt county of Beijing.

Covering an area of 70 hectares, the landfill site was prepared with World Bank loans of 2.53 million U.S. dollars. It has the capacity to bury 2,000 tons of garbage every day, one-fifth the city's total daily refuse needing disposal.

After the site is filled up 11 years later, the area will be afforested to prevent it from polluting the environment.

Foreign Funding Sought for Pollution Cleanup Costs

HK1006032294 Hong Kong SOUTH CHINA MORNING POST (BUSINESS POST) in English 10 Jun 94 p 5

[By Susan Oh]

[Text] The clean-up of China will cost US\$200 billion, most of which must come from overseas investment according to Yu Yuefeng, vice-president of the China Association of Environmental Protection Industry. Mr Yu said it would cost \$15 million to clean the city of Guangzhou alone.

Pollution control was beyond China's means, but investing in the mainland's environmental protection meant having a stake in the market for green technology to emerge in the next two to five years, he said. The Private Sector Committee Environment Centre estimated the global market for environmental technologies to reach \$600 billion by the turn of the century.

"We will need investments internationally and locally. Environmental degradation is an obstacle in the market which cannot be solved by China alone," Mr Yu said. He called on foreign companies to help China develop its own technology to stop environmental degradation resulting from massive industrial development. "Chinese technology is cheap and practical, but only for other Asian centres. We will follow a basic strategy to use foreign investment in order to exploit the market and export overseas," he said. Mr Yu predicted a huge market for environmental technology, but said China's preparations depended on costly American technology.

The most pressing concern was treatment of water and solid waste, which would account for 70 per cent of the \$200 billion. Air pollution, for the promotion health and machine maintenance, was also a concern. China was in desperate need of dust-removal technology for both general and industrial use, Mr Yu said. Machines to extract dust and sulphur were especially needed in the southern region where manufacturing was concentrated. China was looking to foreign companies to develop better ways of treating water from wood and pulp plants, highly concentrated waste water and toxic waste. "We have over 30,000 small pulp plants. Pollution is a concern, but closing them would cause a shortage of paper products," Mr Yu said.

Ordinary mainlanders felt a strong need for environmental protection because of worsening pollution, but a country with per capita income below \$1,000 could do little, he said. "Now that people have bread and butter, they can worry about the environment. There is a growing awareness and concern," he said. Mr Yu said those countries with a per capita income of more than \$3,000 must initiate the process, and countries such as Japan could be doing more to help.

Bulletin Reveals 'Serious' Pollution in Fujian

HK0906135094 Fuzhou Fujian People's Radio Network in Mandarin 2300 GMT 3 Jun 94

[Text] A bulletin on environmental conditions in Fujian Province in 1993 issued yesterday by the provincial environmental protection bureau shows that during the past year, although the growth of our province's GDP was faster than in 1992, environmental pollution had not deteriorated despite rapid economic development and that further ecological damage has been basically curbed, or eased. Our environmental protection work has been strengthened.

However, data in the bulletin shows that current environmental protection in our province is still far from meeting the demands of economic development. In some localities, problems caused by effluent, exhaust fumes, waste residues, and noise still spread unchecked. Environmental pollution, mainly seen in cities and towns across the province, is

becoming serious and is spreading very fast. The scope of ecological damage has widened and has become more acute. In a small number of localities, environmental pollution and ecological damage have become factors constraining sustained, rapid, and healthy development of the local economy.

World Bank Approves Loan for Forest Preservation Work

OW0806204294 Beijing XINHUA in English
2031 GMT 8 Jun 94

[Text] Washington, June 8 (XINHUA)—The World Bank approved today a loan of 200 million U.S. dollars to support China's efforts to protect its forests and increase timber production.

The loan will be used to "help preserve biodiversity in five key nature reserves in China and reduce soil erosion and flooding," the bank said in a statement.

The project, totaling 356 million dollars, is expected to generate six billion dollars in China's domestic wood products in 33 years, the bank said.

China is the world's third largest consumer of timber, using 300 million cubic meters a year. Burgeoning demand and limited supply are creating a worsening imbalance.

About 500,000 hectares of forest area are lost each year in China.

The loan will build 620,000 hectares of managed timber plantations, set up 280,000 hectares of multiple-use forests, strengthen biodiversity conservation, and support technology transfer, the bank said.

Li Ruihuan Meets With Danish Environment Minister

OW1606142194 Beijing XINHUA in English
1314 GMT 16 Jun 94

[Text] Beijing, June 16 (XINHUA)—China values its friendly ties with Denmark and hopes for effective cooperation in environmental protection and other fields.

Li Ruihuan, chairman of the National Committee of the Chinese People's Political Consultative Conference, expressed this at a meeting with visiting Denmark Minister of Environment Svend Auken and his party here today.

China is launching a large-scale economic construction and environmental problems are becoming more conspicuous each passing day, Li said.

The country needs, and has put great emphasis on, learning from and absorbing advanced foreign expertise in environmental protection, he said.

In so doing, he said, "we hope to preserve a good environment, achieve economic growth and bring benefits to future generations."

Denmark boasts many advantages in environmental protection, he said, voicing the hope that the environmental departments of the two countries increase contacts, strengthen exchanges and explore new spheres of friendly cooperation.

During the meeting, Li recalled his recent visit to Denmark. He asked Auken to convey his thanks and best regards to the Danish prime minister, president of the parliament and other leaders.

Though far away from each other, China and Denmark have had friendly ties for a long time. Denmark was one of the first Western countries to set up diplomatic ties with New China and also supported the resumption of China's seat in the United Nations, Li noted.

Auken said China's economy is growing fast and Denmark is keen on extensive cooperation with China in the sector of environmental protection.

Auken and his party are here as guests of the State Bureau for Environmental Protection. Xie Zhenhua, the bureau's director, was present at the meeting.

Communique on Tibet Environmental Situation

OW1606124694 Lhasa XIZANG RIBAO in Chinese
5 Jun 94 pp 1, 3

["Communique on the Tibet Autonomous Region's Environmental Situation in 1993"—by the Tibet Autonomous Regional Bureau of Urban and Rural Construction and Environmental Protection, June 1994; passages within slantlines published in boldface]

[Text] According to Article 11 of the "Environmental Protection Law of the PRC," the Tibet Autonomous Region's environmental situation in 1993 is announced as follows:

I. Environmental Conditions

(1) The Environmental Pollution Situation

1. The Atmosphere

A total of 1.47 billion standard cubic meters of waste gases were discharged in Tibet in 1993, 40 percent more than the previous year. In the discharged waste gases, smog was 98 tonnes, 63.3 percent more than the year before; sulfur dioxide was 1,900 tonnes, up 35.7 percent from the year before; and industrial dust was 14,657.7 tonnes, an increase of 8.6 percent over the previous year.

The daily average measurement over 1993 of suspended particles in the atmosphere in Lhasa was 194 micrograms per cubic meter; the daily average measurement of sulfur dioxide was 615 micrograms per cubic meter; the daily average of nitrogen oxide was 11 micrograms per cubic meter, which was better than the previous year and was up to the state's first-level standard of atmospheric quality. No acid rains occurred in Tibet in 1993.

2. Water

A total of 40.775 million tonnes of waste water was discharged in Tibet in 1993, up 133 percent from the previous year. Of this, industrial waste water was 25.775 million tonnes, up 1,332 percent from the year before. Among the industrial waste water, chemical (?oxygen absorbent) [xu yang liang, 7194

8638 6852] was 25.173 tonnes, heavy metals (mercury and lead) were 0.17 tonnes, arsenic was 45.6 tonnes, and sulphide was 16.32 tonnes. (Note: The reason why industrial waste water increased sharply was that the waste water discharged by the Yangbajing experimental geothermal power plant was included in this figure; over the last few years, only a part of the plant's waste water was taken into account due to technical reasons.)

The quality of water in Tibet's major rivers and lakes reached the state's standards for surface water quality.

3. Noise in Urban Areas

In 1993, the average equivalent sound level of environmental noises in Lhasa city's residential, cultural and educational, commercial, and industrial areas as well as mixed area category two was all above 60 decibels, exceeding the state environmental noise standard for urban areas. Noise levels at eight—or 30.8 percent—of the 26 monitoring points on the city's trunk roads exceeded the standard. Compared to the previous year, the sources of urban noise and their proportions remained unchanged, with traffic noises still topping the list. (Note: mixed area category two refers to areas consisting of industrial, commercial, and residential sectors with small traffic volume)

4. Industrial Solid Wastes and Others

In 1993, Tibet's industrial solid wastes amounted to 2,950 tonnes, up 17 percent over that of the previous year; and the amount discharged was 260 tonnes, up 30 percent. The discharge occupied 0.2 hectares of land, but no farmland was used.

According to relevant investigation, occupational diseases such as pneumoconiosis and toxicosis diagnosed in workers of the region's industrial and mining enterprises were both lower than the national level. In 1993, there was no accident that caused environmental pollution in the region.

(2) The Ecological Environment Situation

1. Forests and Grasslands

According to the outcome of the fourth national inspection on forest resources, Tibet was covered with 7.17 million hectares of forests, fourth among the nation's provinces, municipalities, and autonomous regions. The rate of forest coverage was 9.84 percent, and the region's 2.084 billion cubic meters of timber reserves topped the nation. In 1993, the volume of 200,000 cubic meters of cut timber was lower than that of the region's total forest growth.

Tibet's grasslands continued to degenerate with decreasing grass growth and coverage area. There were serious problems of grass diseases and weed growth, as well as rat and insect pests in grassland regions.

In 1993, the area of public green grounds in urban areas remained relatively unchanged compared to the previous year. The per capita area of public green grounds dropped by four square meters.

2. Land

The farmland area in Tibet was 223,800 hectares, and the per capita farmland area was 1.51 mu. In 1993, 28.24 hectares of farmland were permanently requisitioned for construction.

3. Climatic Changes and Natural Disasters

In 1993, Tibet's climate was basically perennial. The annual rainfall was lower than that for the previous years and its distribution was uneven. The number of days of gales was basically normal, with frequency higher in Lhaze, Baingoin, Ngari, and the northern part of Qamdo, but lower in other areas.

Droughts were severe during early summer in 1993. Uneven rainfall distribution and continuous rainstorms resulted in floods. Heavy rains triggered landslides and disrupted traffic, causing heavy losses. Snowstorms in winter caused the deaths of livestock.

In 1993, the rate of forest fires was 2.6 percent.

II. Environmental Protection

In 1993, China marked the 20th anniversary of commencement of environmental protection as well as the 10th anniversary of incorporation of environmental protection into its basic national policy. The Tibet regional party committee and people's government attached further importance to and strengthened the tasks for environmental protection by adopting the "Decision on Strengthening Environmental Protection." People's congresses and people's political consultative conferences at all levels strengthened their guidance and supervision in the work. Further, governments and departments at all levels earnestly implemented their duties in environmental protection with new progress.

1. Prevention of Environmental Pollution

In 1993, Tibet further upgraded the tasks of preventing environmental pollution. The rate of removed smoke and dust in burnt gaseous wastes was 85 percent, up five percent from the previous year. The rate of treated industrial sewage was 44.8 percent, up 25.9 percent over the previous year. Comprehensive use of industrial solid wastes totalled 1,500 tonnes.

Public facilities in urban areas were further improved. Lhasa city built 4.46 km of new underground sewers, increasing the total length of the city's underground sewers to 80 km.

Tibet directly invested 20.82 million yuan to prevent industrial pollution, an increase of 13.82 million yuan over that of the previous year. Of this, 12 million yuan

was invested in three environmental protection construction projects and 8.57 million yuan was invested in industrial sewage treatment

2. Protection of Ecological Environment

In 1993, Tibet's afforestation covered a total area of 2,680 hectares [ha], up 5.14 percent from the previous year. The Tibetan people voluntarily planted 4.29 million trees, or 741,000 trees more than the previous year; and the region cultivated 638,000 economic trees, an increase of 546,500. Grass was planted on 8,000 ha of land and fencing was erected for some 324,668 ha of grasslands. Elimination of rats, insect pests, and grass diseases was carried out on 15.91 ha [as published], and 27,900 ha of grasslands were irrigated.

According to incomplete statistics, in 1993, Tibet completed 10 water conservancy projects; improved the irrigation for 3,527 ha of farmland; added 960 ha of irrigated farmland; and carried out preservation work for an additional 1,073 ha of irrigated farmland. The completion of seven drinking water projects helped to solve the water supply problem for 1,890 people and 7,890 livestock.

In 1993, Tibet put into operations seven hydroelectric power stations with a generating capacity of 9,220 kilowatts, and added small hydroelectric power generators with a capacity of 3,225 kilowatts in rural areas. An additional 32 villages and 4,868 people were provided with power supply. The "Tibet Yangguang [sun] Plan" entered its second phase. Last year, the region promoted the use of 3,500 units of solar stoves, 180 square meters of solar water heaters, and small solar power sources with a capacity of 4.8 kilowatts. Energy conserved from the use of solar stoves and water heaters was equivalent to some 3,000 tonnes of standard coal. The development of hydroelectric power and the promotion of solar energy use enhanced ecological environmental protection in the region. The comprehensive development work in the middle reaches of the Yarlung Zangbo River, Lhasa River, and Nyang Qu River proceeded well. As of 1993, 18 forestry projects, 25 water conservancy projects, and 4 energy projects—with a total investment of nearly 175 million yuan—had been launched in the region. By building water conservancy projects, revamping medium- and low-yield farmlands, improving grasslands, and planting trees, the comprehensive development in the region has yielded noticeable economic results, social benefits, and environmental results.

We made relatively good progress in building nature conservation areas in 1993. The Mount Qomolangma [Everest] Nature Conservation Area was listed as a state-level nature conservation area. In addition, the regional government approved and established six regional-level nature conservation areas, adding 289,900 square km to Tibet's nature conservation areas. At the end of 1993, Tibet had 13 state- and

regional-level nature conservation areas, with a total area of 325,400 square km, accounting for 26.5 percent of Tibet's total area.

3. Strengthening Environmental Management

A nationwide inspection of enforcement of the environmental protection law was conducted in 1993. The Tibet Regional People's Congress Standing Committee and Government attached great importance to the inspection—we set up a regional leading group to coordinate inspection work, worked out an inspection plan, and laid down a plan for carrying out inspection work. Environmental and resources management departments and law enforcement departments at all levels did their jobs strictly according to the law, and good results were achieved. Over the last few years, assessment of environmental effects has been conducted for all construction projects that might affect the environment. Construction of pollution-prevention facilities has been carried out on 80 percent of regional-level construction projects. The amounts of pollution discharge fees levied by the government in 1993 increased considerably over the previous year, and the fees were levied on more projects than before. In 1993, forestry public security departments uncovered 56 cases involving damaging resources and the environment; cracked four rings engaged in these activities; punished 111 persons; confiscated 650 guns, 98 wildlife products, 35,000 steel loops, 447 iron clips, and 22,600 yuan in stolen money and goods.

All localities in Tibet continued to conduct environmental protection propaganda activities in 1993—they featured television serial reports on environmental protection and held region-wide quizzes on environmental protection. Leaders of Tibet delivered speeches on television on "World Environment Day."

Tibet had 79 environmental protection workers at the end of 1993. An environment monitoring station was built in Xigaze Prefecture and is ready for operation. Shannan Prefecture and Lhasa have approved establishment of environment monitoring stations.

In 1993, the "Study of the Background of Tibet's Soil and Environment" project won the region's second-grade prize for scientific work.

The Tibet Autonomous Regional environment monitoring station was named an advanced environmental protection collective of the country.

Environmental protection benefits the contemporary generation and the generations to come. Currently, Tibet is still one of the country's economically backward areas; therefore, economic development and environmental protection are equally arduous tasks for the region. We need to continue to work hard to maintain and gradually improve Tibet's environmental conditions and to ensure that the region's economy develops in a sustained, rapid, and healthy manner.

Footnote

The data in this communique was provided by the Tibet Autonomous Region's forestry bureau, animal husbandry bureau, water conservancy bureau, meteorological bureau, industrial electric power department, the office of the "Comprehensive Agricultural Development Project of the Yarlung Zangbo, Lhasa, Nyang Qu river valleys" [the "Three River Valleys" project,] public health and epidemic prevention station, solar energy research institute, bureau of urban and rural construction and environmental protection, and the Lhasa city bureau of urban and rural construction and environmental protection.

Nature Reserve Projects Involve World Forestry Specialists

OW1606103594 Beijing XINHUA in English
1025 GMT 16 Jun 94

[Text] Changchun, June 16 (XINHUA)—Northeastern China's Changbai Mountains Nature Reserve, unique in its forest ecosystem and biological variation, is attracting increasing numbers of world ecologists.

It is becoming a sought-after place for international cooperation in research on forest ecosystems.

Set up in 1960, this nature reserve covers more than 190,000 ha. It joined the network of international biosphere protection areas in 1980.

Specialists point out that the same kind of forests had once existed in North America and Europe, but they have vanished because of human felling or through glacier movements. That leaves Changbai as an important genes store for temperate zone animal species and plant varieties.

It has been calculated that there are 2,500 kinds of plants, 500 kinds of vertebrates and nearly a thousand kinds of invertebrates in the area.

The Chinese Academy of Sciences has set up Changbai Mountains Research Station of Forest Ecosystems there.

According to a deputy director of the station, with China's wider opening to the world, ecological research has also ended its seclusion.

Since the research station first invited two ecology advisers from the United Nations' Educational, Scientific and Cultural Organization (UNESCO) to inspect the station in 1979, more than 100 overseas experts have been there to cooperate with Chinese research staff in their studies.

It has finished a cooperative research program with Germany, and another program with Britain, studying the application of forest nitrogen, is going on.

It is also involved in joint studies of volcanic history with the Swiss Academy of Science, and the research of volcanic activity and changes of vegetation with Japan.

The participation of noted world experts and scholars has helped the research there to move further and faster.

Illegal Chemical Waste Shipment Returned to ROK

OW1706105394 Beijing China Radio International
in English to Western North America 0400 GMT 15 Jun 94

[From the "Current Affairs" program]

[Text] China has vowed to prevent hazardous waste materials from being allowed into the country. China Radio's Song Danqi recently interviewed the deputy director of the State Bureau of Environmental Protection, Wu Jia has the report:

The Chinese Government is taking measures to prevent hazardous waste materials from being shipped from overseas into its territory. Wang Yangzu, deputy director of the State Bureau of Environmental Protection, delivered a stern warning in Nanjing, the capital of Jiangsu Province, last Sunday [12 June].

[Wang speaking in Mandarin fading into English translation] He explained: On 25 September 1993, two Chinese corporations and a group of companies from the Republic of Korea [ROK] shipped 1,288 tons of harmful chemical waste to Nanjing Port under the label of fuel oil. The illegal shipment of chemical waste from South Korea was uncovered by the Nanjing Port authorities and caught the attention of the State Council. Through the joint efforts of the departments involved, on 5 March this year, the waste was returned to the port of departure. Wang Yangzu further expressed the Chinese Government's stance against importing of waste from abroad.

[Wang speaking in Mandarin fading into English translation] He said: In recent years the cases of transnational transferring of harmful waste and rubbish were on the increase. He cited another example where Germany had shipped a large number of waste plastic bags to China. He said although a small number of items of harmful waste can be used as recycling materials, the importing must be under strict control. In general, almost all dangerous wastes are prevented from entering China's territory. The State Bureau of Environmental Protection and the General Administration of Customs are now closely cooperating to prevent pollutants from being shipped into China. Meanwhile, China is now formulating a law to prevent solid waste pollution. Wang Yangzu said China will take some legal and economic actions against the violations of the law and regulations. He revealed a number of people from domestic transportation department have been punished in the case of the ROK shipping chemical wastes to Nanjing port. He suggested that environmental protection must be based on legislative administration. All individuals and companies should take responsibility for the sustainable development of the global environment.

Jiangsu Returns Chemical Wastes to South Korea

*OW1706102894 Beijing Central Television Program
One Network in Mandarin 1410 GMT 15 Jun 94*

[From the "Night News" program]

[Text] The State Environmental Protection Bureau and the General Administration of Customs recently commended 12 Jiangsu units for returning 1,288 tonnes of hazardous chemical wastes to overseas consignees. This serious incident of illegal import of hazardous wastes, which occurred half a year ago, has been initially settled.

This serious incident occurred on 25 September last year. Without receiving prior approval from environmental protection departments, Beijing's (Zhongmaofa) Company and Nanjing's (Huagu) Company imported 1,288 tonnes of so-called fuel oil from South Korea to Nanjing Port's (Shanyuan) Wharf. [Video shows longshot of a wharf and many oil barrels on the ground as well as personnel checking the barrels] After a sample check by Jiangsu Import and Export Commodity Inspection Bureau personnel, they found that the shipment was not fuel oil, but hazardous chemical wastes. The Nanjing New District Customs immediately blocked the release of the problematic shipment. Due to the cooperation among relevant state and Jiangsu departments, the illegally imported wastes had all been safely returned to the consignee on 5 March this year. [Video shows a crane loading barrels onto a vessel]. A check shows that during the five-month stay of these hazardous wastes in Nanjing Port, no incident of pollution was reported, thanks to the joint supervision of the Jiangsu and Nanjing Environmental Protection Bureaus. Although these hazardous wastes had been returned to the consignee, there is no knowing what kind of punishment will be meted to those who were responsible for importing these wastes in the first place.

Zhejiang Discovers Imported Industrial Wastes From Japan

*OW1706102794 Beijing Central Television Program
One Network in Mandarin 1410 GMT 15 Jun 94*

[From the "Night News" program]

[Text] At a time when the incidence of imported chemical wastes at Nanjing Port has not been satisfactorily solved, Ningbo Environmental Protection Department and Customs found another shipment of illegally imported hazardous industrial wastes at Ningbo Port. [Video shows piles of metal scrap at a port]

A check showed that the total tonnage of the industrial wastes imported from Japan by the Ningbo branch of Haikou Yongchang Enterprise Company was 1,080 tonnes. Among the industrial wastes were 300 tonnes of scrapped steel and 780 tonnes of scrapped electric motors and refrigerator compressors. Toxic materials were found among the imported industrial wastes. There had been no prior reports on the import of these industrial wastes to environmental protection departments for inspection and approval.

Ningbo Environmental Protection Department and Customs had ordered the Ningbo Branch of Haikou Yongchang

Enterprise Company to stop importing industrial wastes. As for the industrial wastes already imported, all, except the scrapped steel, were blocked for release for future handling.

Official Reiterates Ban on Industrial Waste Imports

*OW1706102594 Beijing Central Television Program
One Network in Mandarin 1410 GMT 15 Jun 94*

[From the "Night News" program]

[Text] As China has yet to promulgate and enforce a law on the control of pollution caused by solid wastes, there is a degree of difficulty in solving the problem of imported hazardous wastes. However, due to repeated occurrences of similar incidents, relevant state departments have begun to attach high importance to such incidents.

In a telephone interview with the station's Nightly News editor today over the importing of chemical wastes at Nanjing Port and of industrial waste at Ningbo Port, Wang Yangzu, deputy director of the State Environmental Protection Bureau, reiterated that as early as 1991, the State Environmental Protection Bureau and the General Administration of Customs had issued a circular on controlling the import of hazardous wastes. Wang Yangzu called on relevant departments in localities to strictly handle matters according to the guidelines set forth in the circular and called on them to mete out severe punishment to units and individuals who import hazardous wastes without authorization.

Government's Anti-Pollution Efforts Pay Dividends

*OW1706044894 Beijing XINHUA in English 0418
GMT 17 Jun 94*

[Text] Beijing, June 17 (XINHUA)—It was sunset and hundreds of fishing boats laden with their catches returned to Jiaozhou Bay in east China.

"We have not had such a good harvest in the coastal waters for years," said a weather-beaten fisherman busy unloading live fish and other aquatic products.

"In the past, the sea water for a time turned blackish and the fish started to die," he said. The picture is now different. He attributed the clean water and the coming back of fish to the Chinese government's anti-pollution efforts.

According to Xu Hongkai, an official of the Qingdao city environmental protection bureau, 80 percent of the pollutants in coastal waters used to come from the land.

Located on Jiaozhou Bay, Qingdao city has studied and worked out regulations to strengthen the oceanic environment, and invested an annual 40 million yuan in cleaning and controlling pollutant sources. It also built four pollution treatment projects with loans from the Asian Development Bank.

"As a result, the contents of key pollutants in the sea water has dropped steadily over the past five years," Xu said.

Qingdao is one of the places benefiting from the government's efforts to protect the oceanic environment.

China has 32,000 kilometers of coastline and three million square kilometers of sea areas, equal to less than one third of the country's landscape.

As long as 15 years ago, the Chinese Government laid down the principle that the environment must be protected alongside economic development, and conducted a number of research surveys on the environment and pollution control in the Bohai Sea and Yellow Sea.

In the early 1980s, the central government formulated six laws to protect the marine environment. The National Bureau of Oceanography set up a nationwide pollutant monitoring network and designated 39 sea zones for the dumping of waste, employing a system of licensing for dumping.

Zhu Guangqing, an official of the State Administration of Environmental Protection, said: "While rearranging the industrial location and product mix, the government has built a number of waste water treatment projects at ports and offshore oilfields and on ships."

It also designated 56 nature reserves to protect the ocean, oceanic ecology, plants and animals. These reserves cover a total area of 3.7 million hectares.

One example is the Yancheng National Nature Reserve in Jiangsu Province, where the number of red-crowned cranes, a rare bird under top government protection, has increased from 200 in 1984 to more than 800 at present.

Nowadays, wherever you go along the coastal areas, you will see bill-boards with slogans like "developing the oceanic economy while protecting the sea".

China has concluded agreements with 30 countries for jointly protecting oceanic resources and environment.

While joining in three international pacts to ban ships leaking oil and polluting the sea, China has joined the efforts to protect the environment of the north-west Pacific Ocean zone and wishes to participate in the plan to protect the oceanic environment of the east Asian sea areas.

Yan Hongmo, director of the National Bureau of Oceanography, acknowledged that there is still room for improvement in the formation of laws and expansion of the number of specialists in oceanic environmental protection. Further efforts are to be made in this field.

He noted that China has just worked out a plan to clean and control pollutants in the sea by the year 2000.

Shaanxi Strengthens Environmental Protection

*OW1806093994 Beijing XINHUA in English
0905 GMT 18 Jun 94*

[Text] Xian, June 18 (XINHUA)—Shaanxi Province in northwest China has scored marked achievements in environmental protection and pollution control.

The province has made great efforts to reduce the discharge of industrial pollutants such as waste gas and water.

Last year the treatment and utilization of waste gas increased by 28 percent, of waste water by 4.7 percent and of

solid waste by 0.54 percent, according to Zhang Lianjie, head of the provincial Environmental Protection Bureau.

The provincial government spent over 100 million yuan (about 12 million U.S. dollars) between 1991 and 1992 to complete 503 pollution-control projects.

In 1993 the province built 52 smoke and dust control zones, covering an area of 236.9 sq km, and 21 noise pollution control zones, covering 108 sq km.

The provincial government also relies on universities and scientific research institutes to help reduce pollution in the cement, textile, metallurgical, power, mineral and chemical industries.

Meanwhile, the province has built 13 nature reserves with a total area of over 164,000 ha, and ecological agricultural demonstration zones in nearly 100 villages.

Some 79 rare animals and plants such as crested ibis, golden monkey and davidia involucrata baill are now well protected in the province.

Chen Junsheng's Message Commends Wasteland Auction

*OW2206093994 Beijing XINHUA in English
0900 GMT 22 Jun 94*

[Text] Harbin, June 22 (XINHUA)—China has launched a new move to auction off more wasteland to farmers in an effort to quicken the building of water and soil conservation projects and help farmers achieve greater economic gains.

To date, the use right of a total of 500,000 hectares of wasteland in north China's Shanxi, Shaanxi and Heilongjiang Provinces had been sold to farmers, according to a national wastelands auction held in Mudanjiang city of northeast China's Heilongjiang Province.

China has more than 300 million hectares of wasteland suffering from serious water loss and soil erosion, over ten percent of which (about 30 million hectares) can be developed.

State Councillor Chen Junsheng sent a message, hailing the opening ceremony of the auction, saying the new move is an extension of China's household contract responsibility system, with remuneration linked to output, that started in rural areas in the late 1970s.

It is a new step, under the new market economic conditions, to initiate a mass movement to tackle soil erosion, he said.

According to the state councillor, the right of development and use of wastelands sold legally allows farmers to explore and use the land for a period of 50 to 100 years. It can be inherited and transferred, he said.

The move helps to bring into full play the initiative of local peasants to control water loss and soil erosion and tap natural resources and further develop agricultural production, Chen said.

He added, it also opens a new way for the surplus labor force in the rural areas to find jobs and helps raise necessary funds for the country's water conservation projects.

Due to various historical reasons, he said, soil erosion in China is still serious. It is of great significance to tackle the problem by mobilizing the masses of people, he said.

He urged governments at all levels to understand and carry out the policy in spirit and to the letter and in the light of the real situation in each locality.

According to the meeting, the main bidders for the use right of large tracts of wasteland are farmers, but personnel from governmental bodies, workers and staff members from

state-owned and private enterprises, as well as overseas business people, are also encouraged to participate.

Wasteland that suffer from serious soil erosion, including barren mountains, valleys, hills, rivers and streams, will be given priority in the sales.

Money raised will be used solely as a special fund in tackling soil erosion problems in other areas.

More than one hundred representatives from the governmental water and soil conservation departments at all levels across the country are taking part in the meeting.

REGIONAL AFFAIRS

Conference Looks at Future of Asia-Pacific Environment

OW2106145094 Tokyo KYODO in English
1429 GMT 21 Jun 94

[Text] Tokyo, June 20 KYODO—Environment ministers and senior officials from 17 Asia-Pacific countries began a two-day conference Tuesday [21 June] to discuss ways of promoting regional cooperation in tackling environmental problems.

Participants in the environment congress for Asia and the Pacific (Eco Asia '94), under way in Omiya outside Tokyo, also include delegates from the Asian Development Bank and 10 other international organizations.

The conference participants are discussing recent global trends for sustainable development, in keeping with decisions made at the 1992 earth summit in Rio de Janeiro. The theme of that summit was "Ecologically Sustainable Development."

Indonesian Environment Minister Sarwono Kusumaatmaja, the keynote speaker, said the political and economic basis for resolving environmental issues should be radically altered in the region, which contains more than half the world's population and is undergoing rapid urbanization and economic growth.

But a Chinese delegate said prices for the region's primary products are low and growth can now only be guaranteed if the region's resources are used to excess.

The Chinese delegate said this can only be remedied if developed countries cooperate by supplying funds and technology to developing countries.

A Canadian delegate recommended devising targets for the preservation or improvement of the environment, while a delegate from the United Nations University suggested the setting up of a center for the supply of information on the environment and technology.

On Wednesday, delegates will discuss a long-term outlook for the region, strategies to cope with urbanization, and cooperation among regional government authorities and agencies.

Environment Meeting Ends With Call for Sustainable Cities

OW2206143594 Tokyo KYODO in English
1126 GMT 22 Jun 94

[Text] Omiya, Japan, June 22 KYODO—Representatives from 16 countries in the Asia-Pacific region ended a two-day environmental meeting Wednesday [22 June] with a call for the development of sustainable cities and the protection of island nations from the effects of global warming.

The call was included in a document adopted at the environment congress for Asia and the Pacific (Eco Asia '94) in Omiya, Saitama Prefecture.

Senior officials from 16 governments, including five ministers, as well as representatives from eight international organizations attended the congress.

The congress, the third since 1991, reviewed progress in achieving environmentally sustainable development in the region since the U.N. Conference on Environment and Development (UNCED), otherwise known as the earth summit, in Rio de Janeiro in June 1992.

The document, issued in the name of the conference chairwoman, Environment Agency Director General Toshiko Hamayotsu, said the region needs to shift from theoretical considerations to "concerted political and practical actions, international cooperation, and sufficient institutional and capacity building."

Countries represented at the congress are home to more than half the world's population, with millions of people concentrated in rapidly growing cities.

The document notes the concern of delegates over pollution and urban crowding in the region caused by rapid economic development at the expense of the environment.

It urges, for the first time at an Eco Asia meeting, the development of the concept of sustainable cities.

It also calls for developed countries to "change their mass consumption lifestyles, provide support for realization of sustainable development in developing countries and prevent the export of pollution."

"Solid waste disposal has become a critical issue in this region," the document says.

The document also incorporates a call made Tuesday by Indonesian Environment Minister Sarwono Kusumaatmaja to "tackle the problems" of small island states.

Indonesia and a number of other Pacific nations incorporate thousands of small, low-lying islands which could be threatened if global warming causes a rise in sea levels.

Although many delegates favored establishment of an Eco Asia secretariat in Japan, opinion was not unanimous and the document merely calls for "development mechanisms for smooth and effective implementation of Eco Asia activities."

Malaysian Environment Minister Hieng Ding Law, who served as congress co-chairman, told a press conference after the congress that there was "a general feeling that Eco Asia should continue."

"It is high time Japan should play a more significant role in implementing UNCED," Law said. "It is important to have a secretariat and a data bank."

AUSTRALIA

New Earth Resources Satellite Station Opens in Hobart

BK1506071794 Melbourne Radio Australia in English
0500 GMT 15 Jun 94

[Text] Australia's space research program has taken a step forward with the opening of an earth resources satellite station in Hobart. The \$2.7 million [Australian dollars] facility was built by the University of Tasmania; the federal government's scientific research organization, the CSIRO [Commonwealth Scientific and Industrial Research Organization]; and the Australian Space Council.

(Don Chocran) of the Space Council says the station will be used to receive information from space on the state of the earth, including oceans, weather pattern, and temperatures:

Begin (Chocran) recording: The ground station is used for receiving images from satellites in space—those are optical images and radar images. And in addition to its use to monitoring the environment, it's also used as a backup for the Alice Springs station which receive data or images from space for monitoring our resources and our environment. [end recording]

CAMBODIA

Columnist Claims Koh Kong Officials Help Log Smugglers

BK1206123394 Phnom Penh REAKSMEI KAMPUCHEA in Cambodian 12 Jun 94 pp 1, 9

[Column by Samret Sar: "The Logging War in Koh Kong Province Has Not Ended Yet. Who Should Be Responsible?"]

[Text] According to a report from Koh Kong Province, in an operation launched on the night of 8 June, the combined ministerial team for cracking down on illegal smuggling along the Sre Ambel Pass held up a barge trying to smuggle processed wood out of the country.

The head of the team reported: While we were holding up the barge, three motor boats from Koh Kong Province's combined team (one of which belongs to the provincial office of forestry and wildlife) led by Ung Voan, second deputy governor of Koh Kong, surrounded the inter-ministerial team's motor boat, directing all their spotlights on it as a threat. Seeing that it was outnumbered by the Koh Kong provincial team, the combined ministerial team then released the timber barge.

The report added that the inter-ministerial team also saw 22 other timber barges tagging after the provincial boats out of that area.

This is the second time this week that the Koh Kong provincial team helped the timber barges get out of Andong Toek area, claiming that it would take action against the barges after bringing them to Koh Kong Province. In the first event on 4 June, the Koh Kong team brought 12 barges carrying about 400 cubic meters of processed wood out of this area, claiming that it would take action against the barges when they returned to Koh Kong Province. But not a

single timber barge was seen in Koh Kong. When asked about it, the provincial team said that all the barges fled along the way.

The report said that these 23 barges carried a total of 750 cubic meters of processed wood.

The sources of the inter-ministerial team reported that the timber carried in the 23 barges were worth about 5,500,000 Thai baht or 750 million riel.

It is not yet known whether this second batch of timber barges will arrive in Koh Kong or not since the first batch already failed to arrive. And if they do not arrive there, what measures will the Ministry of Interior take against Mr. Ung Voan?

The logging war in Koh Kong Province is still going on so terrifyingly. The bad consequences of such anarchy will only cause more complicated problems and distrust.

Those who have kept a close watch on this matter say: In such a situation, who will listen to whom and who are to be responsible for all the bad consequences?

JAPAN

Environment Agency: Ozone-Harming Gas Levels Stable

OW2306135594 Tokyo KYODO in English
1103 GMT 23 Jun 94

[Text] Tokyo, June 23 KYODO—An apparent stabilization of densities of gases harmful to the ozone layer over Japan in 1993 is no reason for complacency, the Environment Agency's annual report on the state of the ozone layer said Thursday [23 June].

The report said densities of chlorofluorocarbons (CFCs) and other gases believed harmful to the ozone layer stabilized or dropped over Japan in 1993.

But it said ozone densities over Sapporo and four other points where data was gathered also dropped, with the average density over Sapporo a record 7.7 percent below normal.

Scientists have confirmed that except for the tropical zones, the earth's ozone layer is decreasing. The layer protects the earth from the otherwise harmful effects of excess ultraviolet rays.

They have warned that any increase in ultraviolet rays reaching the earth's surface could damage crops and cause a rise in the incidence of skin cancers.

The report said that compared with levels in successive years until 1990, record low ozone densities were recorded in 1993 over Sapporo between January and June, over Tsukuba in January, over Kagoshima in January and May, and over Naha in January, July and August.

Compared with the past, the average densities in 1993 were down by 7.7 percent over Sapporo, 3.2 percent over Tsukuba, 1.1 percent over Kagoshima and 3 percent over Naha.

But the report said densities were back to normal this year between January and April.

The report also said that more than the 10-year period prior to the survey, the ozone density dropped 5.7 percent over Sapporo but did not drop over Tsukuba, Kagoshima and Naha.

The report did not confirm any increase in harmful ultraviolet rays reaching the ground.

It also said the annual increase in densities of CFCs which under an international agreement known as the Montreal protocol are scheduled to be phased out worldwide by the end of 1995, has been held to between 1 and 3 percent.

The agency said international efforts to contain substances which harm the ozone layer are beginning to show results.

But it warned that compared with data available when the hole in the south polar ozone layer was recorded in 1970, densities of substances which harm ozone have increased several times over, pointing to the need to recycle or destroy CFCs.

Report Says China Unlikely To Meet Emissions Target

*OW1006132794 Tokyo KYODO in English
1015 GMT 10 Jun 94*

[Text] Tokyo, June 10 KYODO—China will release over 1.17 billion tons of carbon dioxide into the air annually by 2000, exceeding its targeted ceiling for emissions of the greenhouse gas by 150-160 million tons, a Japanese environmental institute forecast Friday [10 June].

The Environmental Information Center, an auxiliary organization to the Environment Agency, said that China, despite efforts to reduce emissions and cut energy consumption, will need Japanese funds and technology to reach its target.

Due to rapid economic development, China's carbon dioxide emissions soared to 680 million tons in 1990, amounting to some 10 percent of the global production of the gas.

Carbon dioxide, a main cause of global warming, originates from the burning of fossil fuels such as oil and coal, which are China's major sources of energy.

The center's forecast is based on the assumption that China's annual economic growth, running at double-digit rates in recent years, will slow to between 8 and 9 percent in the years from now until the turn of the century.

Taking into account economic targets set under Beijing's Eighth Five-Year Plan, the report estimated that China's hard coal production will increase to 1.25 billion tons in 1995, a 16 percent increase over 1990.

Without any energy-saving measures, China's carbon dioxide emissions would increase by 2.3 times in the 1990-2000 decade to reach 1.59 billion tons, the report said.

By contrast, China could reduce its carbon dioxide emissions by at least 410 million tons by 2000 if it introduced

boilers and kitchen-stoves with a higher efficiency, installed regional heating systems and replaced steam locomotives with diesel or electric locomotives, according to the report.

Such changes would also allow China to reduce energy consumption by 2.7 percent a year, it said.

China's targets for 2000 are 1.02 billion tons in carbon dioxide emissions and 4.4 percent in the rate of energy savings, both far away from the projected figures.

Judging from the fact that China's energy savings rate declined by 3.7 percent over the last 10 years, the report predicted that China might experience energy shortages in the future, as neither energy supply nor energy savings can keep pace with the booming economy's soaring demand.

The report suggested that the Japanese Government promote the efficient use of coal, assist in the development of energy-saving technology and join in the formulation of environmental policies in China.

Firm Develops Way To Stabilize, Recover CFC's

*OW1506123294 Tokyo KYODO in English
1142 GMT 15 Jun 94*

[Text] Kyoto, June 15 KYODO—A Japanese semiconductor parts maker has developed a technique for stabilizing and recovering one of the gases that scientists believe harm the ozone layer and contribute to global warming, a company spokesman said Wednesday [15 June].

The technique, developed by Kyoto-based Samco International Inc., stabilizes chlorofluorocarbon-113 (CFC-113) as a highly polymerized compound.

The company will announce the finding at a Tokyo University symposium on plasma Thursday, the spokesman said.

At its production peak in 1989, CFC-113 made up about half of Japan's domestic CFC shipments from factories. CFCs are mainly used as refrigerants, propellants in aerosols and cleaning agents for semiconductors.

The technique involves causing a reaction between CFC-113 and hydrocarbons like ethylene and ethane, which have a chemical structure similar to that of CFC-113, in a low temperature plasma produced in vacuum, and then recovering the resultant highly polymerized membrane.

The membrane binds about 60 percent of the harmful fluorides and chlorides.

The current recovery rate is around 40 percent, but the spokesman said it is possible, through the recycling of leftover gas and other methods, to achieve a 100 percent treatment rate. The method is also applicable to other CFCs.

Compared to the standard method of treatment which involves breaking down CFCs at extremely high temperatures, the new technique cuts costs because it involves equipment of a relatively small scale and heating to only around 40 C, a level relatively close to normal room temperatures.

Ozone, a molecule consisting of three oxygen atoms, is diffused throughout the upper reaches of the earth's atmosphere and blocks much of the harmful ultraviolet light radiating from the sun.

CFCs are to be phased out worldwide by 1996, in accord with the Montreal Protocol, an international agreement drawn up under the auspices of the United Nations Environment Program.

Study Says One in Six Rainfalls Produces Acid Rain

*OW2006105994 Tokyo KYODO in English
1040 GMT 20 Jun 94*

[Text] Tokyo, June 20 KYODO—One out of every six rainfalls in Japan produces acid rain with a nitric ion density exceeding the norm declared by the government as harmless to farm products, an environmental group said Monday [20 June].

The Civic Bank Eco Laboratory obtained the findings as the result of its three-year analytical survey of 4,300 rain samples collected by about 1,500 group members at some 300 locations throughout Japan, a group spokesman said.

The spokesman warned that rain with such a high density of nitric ions may have adverse effects on agricultural products.

The group said the survey found 17 percent of the rain samples contained "more than 4.5 milligrams" of nitric ions per liter. The figure is equivalent to 1 milligram of nitrogen.

The group said the figure is alarming, as it exceeds the 1 milligram standard for nitrogen density in water pools reserved for agricultural use, set by the ministry of agriculture, forestry and fisheries.

Acid rain is known to occur when sulfur oxides and nitric oxides discharged by factories and automobiles are ionized and then absorbed by rain.

By region, the survey found that the highest nitric ion densities were detected in rain samples collected in Japan's four major cities of Tokyo, Osaka, Nagoya and Kitakyushu and their environs as well as at mountainous basins in Yamanashi and Nagano Prefectures.

To cite a few conspicuous examples, the group said they detected 7.8 milligrams of nitric ions per liter in rain samples in the city of Atsugi in Kanagawa Prefecture, and 7.3 milligrams in Tokyo's Nakano Ward—both measured in June, 1993.

Guidelines Proposed for Environment Protection Plans

*OW2006100394 Tokyo KYODO in English
0927 GMT 20 Jun 94*

[Text] Tokyo, June 20 KYODO—An Environment Agency panel Monday [20 June] announced guidelines for local governments in drawing up their action plans to protect the global environment.

The panel said in the guidelines that the objective of those plans should be to realize a society where development can coexist with the environment.

The guidelines requested local governments to incorporate in their plans ways to prevent pollution, and to promote agriculture, forestry and fisheries in harmony with the environment.

They also said participation by citizens in making the plans is necessary, and proposed several means to facilitate their participation such as setting up consultative bodies, holding public hearings and conducting surveys.

Kanagawa, Hiroshima, Chiba, Shiga and Yamanashi Prefectural Governments have already drawn up their action plans.

NORTH KOREA

Hanminjon on Environmental Destruction in ROK

*SK1006105694 Pyongyang KCNA in English
1012 GMT 10 Jun 94*

[Text] Pyongyang, June 10 (KCNA)—The propaganda department of the Central Committee of the South Korean National Democratic Front (Hanminjon) on June 5 released "Article to the Entire People" throwing a revealing light on the environmental destruction in South Korea on "world day of environment," according to Seoul-based radio Voice of National Salvation.

The land, rivers and sea, the article says, have been polluted, leaving to the people no place where they can live without worries, due to the crimes of the South Korean puppets in reducing South Korea to a garbage dump of the imperialists and appendage to the Western pollution-causing industries.

Pointing out that South Korea has been reduced to a land of radioactive pollution owing to the puppet clique's development of nuclear weapons, the article says the danger of nuclear scourge is not a possibility of tomorrow but the reality today.

The article appeals to the South Korean people to turn out to expand the struggle for the dismantling of atomic reactors, the sources of disasters, introduced by the authorities for the criminal development of nuclear weapons, and against the building of nuclear waste dumps into an all-people movement to defend the land of people's life.

SOUTH KOREA

Foreign Minister on Nuclear Weapons, Environment

*SK1406032194 Seoul YONHAP in English
0221 GMT 14 Jun 94*

[Text] Seoul, June 14 (YONHAP)—Foreign Minister Han Sung-chu Tuesday labeled nuclear weapons and the environment as critical issues for the world in the coming century.

Scientists widely believe that cultural evolution brought about material comfort and prosperity while also posing dangers to human existence, Han said in a speech at the international media conference on the environment and development.

"As we try to connect this view of natural science to that of social science, we will find that they match perfectly at this juncture, a juncture where the world is struggling to cope with the end of the Cold War and the conclusion of the Uruguay Round," said Han.

"The former has pushed forward the nuclear question, whereas the latter has catapulted the environmental question to the center stage," the foreign minister said.

"...The dual questions, nuclear weapons and the environment, have become critical issues for the world and especially for Korea, which also is arguably the most densely populated country in the world," said Han.

The foreign minister emphasized the need for regional cooperation in Northeast Asia, which is "characterized by a high population concentration and dynamic economic activity."

LAOS

Government Takes Steps in Forested Areas

BK0906105894 Vientiane VIENTIANE TIMES in English
13-19 May 94 p 6

[Text] Forest area in the Lao PDR [Lao People's Democratic Republic] remains at just 11 million hectares or about 47 per cent of the country's total area, while the bare area has increased by 43 per cent or 10.2 million hectares, a report said at the nationwide meeting on forestation, tree nursery and land allocation held in Vientiane early last week.

The report indicated that in 1940, the country had a total forest area of 17 million hectares or 70 per cent of its total area. This forest area shrank to 12.7 million hectares by 1973 and 11.2 million by 1981 and is 11 million at present. The reduction in the forest cover was the consequence of various practices, such as slash and burn cultivation, forest fire, and wanton tree-felling.

To restore and preserve the forest, the government has issued regulations facilitating and ensuring the plantation of trees on a family and business basis. Timber traders are now compelled to undertake tree planting. To families engaged in slash and burn cultivation, the government will allocate cultivation and production land. Those living in watershed areas will be allocated new settlements or assigned to rehabilitate the forest in their particular areas.

The government agencies concerned have in the past years made several efforts to protect and develop the forestry resources of the country with the participation of both the private and public sectors. This involves reforestation and restricting slash and burn farming, especially in mountainous areas. At the same time, measures have been taken against those who illegally fell trees and who start forest fires.

Sweden has assisted Laos in preserving forestry resources through the Lao-Swedish cooperation project for the restriction of slash and burn farming.

MALAYSIA

Minister Asks UNEP To Help Curb Toxic Chemical Dumping

BK1506041094 Kuala Lumpur BERNAMA in English
0320 GMT 15 Jun 94

[Text] Kuala Lumpur, June 15 (OANA-BERNAMA)—Malaysia has asked the United Nations Environment Programme (UNEP) to assist in its joint move with Denmark to draw up an international regulation to curb dumping of toxic chemicals in developing countries.

Science, Technology and Environment Minister Law Hieng Ding said Tuesday, he made the request to UNEP Under Secretary-General Elizabeth Dowdeswell since UNEP had been an active and strong supporter of international chemical safety programmes.

Dowdeswell was also briefed on the discussion I had with Danish Environment Minister Svend Auken, Law told reporters after receiving Dowdeswell, who is on a two-day official visit here.

Monday, Malaysia and Denmark agreed to work together in formulating an international regulation to control the trafficking of banned and restricted chemicals like DDT [dichloro-diphenyl-trichloro-ethane] from industrialised nations to developing countries.

Law said during their one-hour meeting, they also discussed a wide range of subjects, among them, the role of UNEP in the restructuring of the global environmental facilities, where he hoped UNEP could play a much bigger role.

He said they also discussed Agenda 21, the world's action plan to protect the environment.

Malaysia also suggested a possible dialogue among Southeast Asian countries, Australia and New Zealand on environment matters.

Dowdeswell, who is on her first visit here, said the UNEP was very keen to work with Malaysia and Denmark on enforcing the ban on toxic chemicals dumping since UNEP had been promoting chemical safety.

Accord on Environmental Protection Signed with Denmark

BK1306082494 Kuala Lumpur Voice of Malaysia
in English 0600 GMT 13 Jun 94

[Text] Malaysia and Denmark today signed a memorandum of understanding, MOU, to cooperate on environmental protection and natural resources management. Under the MOU, the Danish Government will fund Malaysia with U.S. \$10 million per year for a period of five years. Minister of Science, Technology, and Environment Datuk Law Hieng Ding signed on behalf of Malaysia, while the Danish minister of environment, Mr. Svend Auken, signed for his government in Kuala Lumpur.

Speaking to newsmen, Datuk Law said the Danish cooperation for environment and development, or (?Dance) program, had identified three major projects. These include the national coastal zone management plan, the establishment

of Institute of Environmental Studies, and Institute of Environmental Technology and Management. Datuk Law said once the project is completed, the technology developed would be shared with other countries in the region.

Meanwhile, the Danish environment minister said the hazardous waste collection system, to be constructed in Penang, will become a model for similar system in the region. It is expected to be implemented in Thailand and Vietnam as well.

TAIWAN

Report Says Former RCA Plants 'Seriously Contaminated'

OW1806104194 Taipei CNA in English
0709 GMT 18 Jun 94

[By Debbie Kuo]

[Text] Taipei, June 18 (CNA)—The former RCA Taoyuan and Chupei plants and surrounding areas were declared to be "seriously contaminated" by the Industrial Technology Research Institute Friday [17 June].

Results of the institute's random testing of water from private wells and reports of three foreign industrial consulting firms have confirmed alarming rates of organic-solvent contamination in the surrounding areas, institute officials said.

Water in 18 of the 40 wells within a one-kilometer radius of the Taoyuan plant were found to be contaminated with trichloroethylene and tetrachloroethylene. Tetrachloroethylene found in water samples taken from well No. 4 registered 210 parts per billion [ppb], which is 42 times higher than the government-allowed maximum of 5 ppb.

Reports of the Bechtel Corp., which was contracted by Thomson Consumer Electronics Co. to investigate pollution at the RCA plant in 1990, showed that tetrachloroethylene in the plant's production wells was found to be at levels ranging from 10 parts per million [ppm] to 1,100 ppm, or 200,000 times higher than the allowed maximum.

Thomson, a French-based firm, began using the RCA plant in 1988 after it secured the plant from the U.S.-based General Electric Co. [GE], which bought RCA in 1986.

GE had hired the U.S. industrial consultant D&M Co. to do investigation possible contamination around the Taoyuan plant in 1988.

The institute said that both GE and Thomson knew about the toxic waste but did not take preventive measures to offset any negative impacts, such as informing plant workers and residents in the neighborhood to refrain from drinking underground water in the area. Instead, the two companies chose to bury the contaminants in 11 wells at the Taoyuan plant and four wells at the Chupei plant.

Eight other wells in the vicinity of the Chupei plant, now owned by Japanese-based Ushio Co. which produces halogen lamps, were also found contaminated with tetrachloroethylene, the institute said.

The contaminants, however, could be derived from other sources, it said. Situated behind Ushio is Philips Taiwan, while Yuloong Styrofoam Co. lies opposite the Chupei plant.

According to medical research data, trichloroethylene and tetrachloroethylene may be carcinogenic and are damaging to the liver, heart, and central nervous system.

The environmental protection administration has decided to speed up operations to enable tap water to be supplied to residents in the vicinity of the two plants from a source other than groundwater as soon as possible.

Meanwhile, the construction affairs department of the Ministry of the Interior announced that it will freeze an application by the current owner of the Taoyuan plant to use the land for commercial or residential use rather than for industrial use.

THAILAND

Denmark To Support Environment Management Projects

BK1006071294 Bangkok Radio Thailand Network
in English 0000 GMT 10 Jun 94

[Text] The Government of Denmark has offered financial support to environmental and natural resources management projects in Thailand.

Minister to the Prime Minister's Office Chinnawut Sunthonsima and visiting Danish Minister of Environment Svend Auken signed a memorandum of understanding for environmental management cooperation between the two countries.

The Danish Government has set up the Danish Cooperation for Environment and Development [Danced] to support the activities of the United Nations Conference on Environment and Development, or UNCED, for the Earth Summit.

Danced has planned an allocation of U.S. \$ 200 million for the first stage of the environmental cooperation in the signed four-year project. Danced has targeted Thailand and Malaysia for its cooperation in environmental management project in Southeast Asia.

Thailand is expected to receive about U.S.\$ 10 million from Danced to implement projects for environmental conservation and protection from the end of this year to next year.

Danced, which was set up in accordance with the Earth Summit in Rio de Janeiro, will offer such cooperation for selected countries. Only countries which have been considered as regional focal points will get financial support from Danced.

VIETNAM

Joint Survey With Russia To Explore Water Territory

BK1306070394 Hanoi VNA in English 0637 GMT 13 Jun 94

[Text] Hanoi VNA June 13—Vietnam and the Federation of Russia on June 9 began their joint 1994 scientific investigation and exploration of Vietnamese water territory.

The 18th investigation, launched within the framework of the agreement reached in 1980 between Vietnam and the former

Soviet Union, now the Russian Federation continues, aims to gather hydrographic, hydratonic and environmental parameters of the Vietnamese water territory. Although previous investigations were all carried out in autumn and winter, this year, for the first time it is conducted in summer and will last 55 days.

As planned, a directory on the meteorological and hydrological conditions of Vietnamese water territory will be published in 1995 to the service of the development of various domains.

REGIONAL AFFAIRS

Proposal for Balkan Environmental Protection Meeting

LD1506162694 Belgrade TANJUG in English
1617 GMT 15 Jun 94

[Text] Belgrade, June 15 (TANJUG)—Yugoslavia will come out with a proposal for a Balkan ministerial conference on environmental protection, Yugoslav Environment Minister Slobodanka Djordan announced on Wednesday.

Djordan told reporters the conference, which should be held by the end of the year, aimed to revive the environmental policy in the Balkans and to establish an environmental balance in the region.

She also said that Yugoslavia was signatory to some 50 international conventions on environment protection and that it had ratified ten more conventions.

She explained that international sanctions against Yugoslavia had isolated it from the rest of the world, 'which is absurd because ecology cannot be confined to within state borders.'

Yugoslavia has applied for 1.5 billion dollars' worth of loans from the World Bank for 23 projects dealing with the most pressing environmental issues, but the loans have been postponed for until the sanctions have been lifted.

Djordan said that Yugoslavia was investing every effort in preserving the environment, despite its modest capabilities.

The U.N. Security Council sanctions against Yugoslavia (Serbia/Montenegro) were imposed on May 30, 1992, because of alleged Yugoslav involvement in the civil war in neighbouring Bosnia-Herzegovina.

CZECH REPUBLIC

Article Assesses Damage Caused by Soviet Troops

AU2106112094 Prague MLADA FRONTA DNES
in Czech 17 Jun 94 p 3

["(vrs)"]-signed report: "The Damage Caused by the Soviet Army Will Cost Quite a Lot"]

[Text] Prague—The state will provide more than 140 million korunas this year to clear up the damage caused by the former Soviet Army. This works out at 14 korunas for each citizen.

First and foremost, it is essential to clean up the underground waters and the parcels of land contaminated by fuel and to dispose of the unexploded munitions the Soviets left behind. "The source of the damage, which is deemed to be Russia, has not spent anything on rectification and it is not envisaged that anything will be spent," said Jaroslav Ruzicka, an Environment Ministry expert.

Clearing up the damage left behind by the former Soviet Army has already cost almost 400 million korunas in the years 1991-93; this is roughly one-fifth of what, according to estimates, will have to be spent as a whole.

Ruzicka said that a lot of unnecessary damage was done to the environment because the withdrawal of the Soviet troops from the Republic was very sudden. "In Germany, the Russians' withdrawal has been staggered over a period of several years and so it is under greater control," he said. Ruzicka commented, however, that the damage caused by the Czech Army is—to say the least—the same.

HUNGARY

Article Views State of Environment

AU2106075594 Budapest NEPSZAVA in Hungarian
20 Jan 94 p 12

["O.Z."-signed article: "Facts About the State of Our Environment"]

[Text] The proportion of environmental investments before 1982 stood at 0.4-0.5 percent of the gross domestic product. Thus, a temporary increase was spectacular in the mid-eighties: to 1 percent. Some role in this improvement was played by the fact that some investments were qualified as environmental protection. More than 10 billion forints were spent on building sewage purification plants between 1981 and 1987. The programs aimed at neutralizing the dangerous waste materials began between 1987 and 1990. It can be generally concluded that most of the environmental protection investments of the last decade served to protect water and air purity, but on the principle of availability. So it is natural that, with the accumulation of economic problems, both the value and proportion of environmental protection projects fell to the level prevailing at the end of the seventies and the beginning of the eighties. All this can be seen in the recent study of the Ministry of Environmental Protection and Area Development, which presents the state of Hungary's environment.

The development level of a given country is excellently reflected by the amount of energy needed for the production of a given product. Although the average energy consumption in Hungary has improved considerably, it is still four times greater than that of the Austrian or Danish figures.

The health of the population is closely connected with the state of the environment of a given country. In view of recent years' statistics, the proportion of people suffering from chronic diseases of the respiratory organs has been increasing constantly, and the number of older and new cases has reached 200,000. Experts forecast some 10,000-20,000 new cases annually. Allergic asthma is the most frequent illness among children and adolescents, and chronic bronchitis and malignant bronchial tumors are the most frequent ailments among men over 40 years of age. (There were 3,960 such cases in 1980, and 5,557 in 1992).

There are 3,000 plant and 42,000 animal species found in Hungary today. Owing to environmental effects, 40 species of plants and 53 species of animals have been proved to be extinct, and another 1,130 species—or 2.5 percent of our flora and fauna—are endangered. A considerable danger threatens the flora and fauna living in the vicinity of large towns. One of the ways to halt the destruction is to protect the relevant areas. Some 7.53 percent of Hungary's territory

is currently under environmental protection. Some 18 percent of Hungary's territory of 93,000 square km, or 1.7 million hectares, are covered by forests. Although the forests have grown by 600,000 hectares in the past 50 years, this still lags considerably behind the European average of 30 percent. Some 55 percent of our forests are indigenous species, such as the beech, the oak, and the blue beech. There has been an increase in the number of fast-growing noble poplars, acacia, and pine trees.

In the case of environment protection, people are most susceptible to changes in the air quality. According to various measurements, 3.9 percent of Hungary's territory is heavily polluted, and 26.8 percent of the population live in these areas. Some 9.3 percent of the area is moderately polluted, and 23.7 percent of the Hungarian citizens are breathing this moderately polluted air.

The production of sulphur dioxide has fallen considerably in the past decade, as has the emission of nitric oxides and carbon monoxide.

According to this study, 18 percent of our citizens find their flats too noisy; this percentage reaches 20-30 percent in the towns. More than 50 percent of the population blamed transportation, and primarily public road traffic, as the most important source of noise pollution. Only 8-10 percent of the population are disturbed by railroad traffic. However, these people are disturbed by the railroad points operating during the night. Noise pollution rarely falls below 60-65 decibels along the main routes at night.

Water— Some 90 percent of Hungary's drinking water comes from underground reservoirs, an remarkable proportion even compared with world standards. Because of the favorable geological conditions, underground water can be found almost everywhere. The 70,000 square km of ground water is particularly sensitive to surface pollution. The situation in two areas is particularly critical. The ground water level in the Szigetkoz area is decreasing consistently, and the same applies to the area between the Danube and the Tisza. The level has fallen by five meters. Some 96 percent of the surface water comes from our neighbors. Although the amount of water carried by these rivers has decreased in recent years, the pollution has not decreased. Because of drought, more than four million cubic meters of drinking-quality water has been pumped into Lake Velence

in the past three years as a temporary solution, because nature should take care of replenishing the lost water.

Arable land, including forests, makes up almost 90 percent of Hungary's territory, and this is a unique natural endowment and responsibility in Europe. The 6.5 million hectares of agricultural land cultivated today has decreased by one million hectares in the past decades. Water erosion causes the destruction of about 1.5 million tons of organic material annually, while soil production is considerably slower than that; some 2.3 million hectares of soil are qualified as sour. Given this region's basin character, the ground in some areas becomes easily saturated with native soda; close to 1 million hectares have already become saline.

Hungary produced 84 million tonnes of waste in 1992, including 4 million tonnes of dangerous waste. Most of the solid waste is deposited in haphazardly chosen dumps, without taking into consideration the environmental protection factors. Some of these waste dumps have become obsolete. The only waste incinerator in Hungary operates in Budapest, with a capacity of 300,000 tonnes annually. The construction of the national network of dangerous waste treatment is advancing slowly. A dangerous waste dump has been built in Aszod, with a capacity of 10,000 tonnes annually, and an incinerator in Dorog, with a capacity of 25,000 tonnes.

Entrepreneurs carry out the gathering and utilization of dangerous waste originating from hospitals and other animal wastes. They regularly transport waste from 55 percent of the urban population. This proportion is no smaller in the villages, but waste there is transported away more rarely. Some 43.2 percent of homes have been connected to the sewage system so far. The sewage of only 20 percent of the population is treated at biological sewage treatment plants. Two-thirds of homes are connected to mechanical or only partially mechanical sewage treatment plants.

Many people may think that the building environment is not closely connected to the above, but it must be mentioned that close to 10,000 buildings in Hungary are under monument protection. Some six percent of these buildings are in a technically acceptable condition, 30 percent require renovation, and 10 percent are threatened. Although Hungary is poor in monuments compared with other countries, monuments that make up the world's heritage are under adequate protection.

REGIONAL AFFAIRS

Southern Cone Environmental Issues

PY1306130394

[Editorial Report]

Argentina

Army Chief of Staff General Martin Balza has stressed the need "to establish guidelines in the educational system as an instrument with which to confront the process of the destruction and pollution of the environment." He said this during the first meeting of the armies from the Common Market of the South member countries, which was held in Buenos Aires to debate the issue of "the army and the environment." Representatives from the armies of Argentina, Brazil, Paraguay, and Uruguay attended this meeting to analyze their contributions to the defense of the ecological system. The military established objectives and how to meet them. (Buenos Aires NOTICIAS ARGENTINAS in Spanish 1350 GMT 4 Jun 94)

Bolivia

On 2 June Senate First Vice President Guillermo Roso criticized the irresponsibility of mining companies, which are seriously contaminating the soil and water, causing many problems for a large sector of the population. Millions of Bolivians have emigrated to neighboring countries because of the poor management of lands, among other reasons. (La Paz HOY in Spanish 3 Jun 94 p 11)

La Paz will become the first South American city to industrialize garbage for the production of electricity and industrial fertilizer. Plastic, one of the worst enemies of the local ecology, will be also recycled, as will materials like glass and metal. The Netherlands company Dynaf will begin the construction of a multipurpose waste treatment plant within six weeks, at a cost of \$27 million. La Paz produces approximately 120,000 metric tons of waste per year, of which 75 percent can be used for industrial purpose, while the remainder can be used to improve the soil. (La Paz LA RAZON in Spanish 3 Jun 94 p A2)

The police have arrested six men for having killed approximately 7,000 flamingos to sell their feathers. They were arrested in the region of Llapa Llapini, Challapata Province, Oruro Department. The men were charged with violating ecological regulations. (La Paz Television Nacional Network in Spanish 1700 GMT 9 Jun 94)

The Forest Development Center named a commission that will investigate an environmental disaster in the Piraicito River, located between the northern townships of San Pedro Hardemann and Cuatro Ojitos. The serious water pollution has killed thousands of fish. The pollution is believed to be from a sugar mill or chemicals from a destroyed cocaine factory or from washing clothes in the river. (Santa Cruz EL MUNDO in Spanish 4 Jun 94 p 8)

On 4 June, the Bolivian Environment and Development Forum, Fobomade, charged that approximately 1.5 million peasants from Potosi, Chuquisaca, and Tarija Departments are suffering from the Pilcomayo River's contamination. At

least 500 Potosi mines are dumping chemicals and waste in the river. Fobomade warned that this could become a national catastrophe. (La Paz PRESENCIA in Spanish 5 Jun 94 p 1)

Brazil

Government representatives and business organizations have outlined a thorough program designed to substantially change the way that chlorofluorocarbons, CFC's, are used in Brazil. The program will be submitted to the meeting of the Montreal Protocol committee on 8 June. This committee is empowered to debate the programs and financing aimed at reducing emissions of CFC's and other substances that are harmful to the ozone layer. Brazil's proposal includes a training program for 35,000 technicians nationwide to prevent spills of CFC's. Brazil wastes 4.2 metric tons of CFC's per year. (Sao Paulo GAZETA MERCANTIL in Portuguese 31 May 94 p 15)

The Brazilian Institute of Geography and Statistics reported on 8 June that 303 species and subspecies of Brazilian fauna are in danger of extinction. This figure differs from the approximately 250 species estimated by the Brazilian Institute for the Environment and Renewable Natural Resources. Most of these animals live in the Mata Atlantica forest, which today covers barely three to five percent of its original territory. Biologist Luiz Carlos Aveline remarked: "There is a true extermination of species going on, through the predatory actions of man." (Rio de Janeiro AGENCIA ESTADO in Portuguese 2230 GMT 9 Jun 94)

Edis Milare, Sao Paulo State Environmental, Cetesb, secretary; the State Basic Sanitation Engineering Company; and the Bertioga Prefecture in the Sao Paulo coastal zone on 10 June signed a cooperation agreement to improve and control sea water. The 500 families living in the Agua Fria shantytown will be removed by court order because they are polluting the water in the Baixada Santista area. (Sao Paulo AGENCIA O ESTADO in Portuguese 2020 GMT 10 Jun 94)

The Sao Paulo Government and the German Development Bank on 14 Jun signed a \$17 million agreement to protect the Mata Atlantica forest reserve. The agreement provides for the control of 175,000 hectares of the reserve on the Parana-Sao Paulo State border. Civilian and forestry police will conduct a joint operation in critical places in Jacupiranga Park in Vale do Ribeira, Sao Paulo State, and Lauraceas Park in Parana State. Lieutenant Colonel Rubens Costa, Sao Paulo 3d Forestry Battalion commander, said the operation seeks to support the national environmental program. (Sao Paulo AGENCIA O ESTADO in Portuguese 2036 GMT 14 Jun 94)

Basf Brasileira Inc. last week put into operation an industrial waste incinerator in the Guaratingueta industrial plant, in Vale do Paraiba, Sao Paulo State. Cetesb granted a 60-day provisional license to the company to test the burning and to analyze the efficiency of the dangerous organic elements destruction process. The incinerator has the capacity to burn 245 metric tons of dangerous waste per month. The company currently has 5,000 metric tons of material stored in barrels or plastic containers. Plant director Odilon Ern said: "This

volume is enough to keep the incinerator operating for the next four years." (Sao Paulo GAZETA MERCANTIL in Portuguese 14 Jun 94 p 18)

Chile

President Eduardo Frei's administration has issued a resolution prohibiting the use of wood from the Magallanes region's native forests for manufacturing or export purposes. This information was released on 1 June by the "Supporters of the Chilean Forest" ecological group, in a communique in which they praise the president's decision. The measure will help to protect an important species in Chilean native forests. A fragile ecosystem prevails in the Magallanes region, where only the lenga, a type of southern oak, can survive. The La Magallanica sawmill has been exploiting the lenga forests for three years to obtain the raw materials for producing computer paper. (Madrid EFE in Spanish 2352 GMT 1 Jun 94)

Rancagua Regional Health Director Bernardo Espinoza said that if the state does not provide the funds needed to implement an anti-pollution program, the El Teniente Mine could be partially closed. He added that this program is "absolutely necessary" for the township of Coya, which has more than 6,000 inhabitants. Coya has been declared a zone saturated with polluting elements, such as the sulphuric acid produced by the smokestacks. (Santiago LA TERCERA DE LA HORA in Spanish 7 Jun 94 p 13)

A survey released by the National Resources Ministry on 7 June shows that Chileans are concerned mainly about air and water pollution and the treatment of waste. The survey, which polled 1,500 people from the country's four regions, shows that 88 percent of those surveyed are worried about air pollution; 55.1 percent about water pollution, and 31.8 percent about waste treatment. Air pollution affects mainly Santiago, which has 5.5 million inhabitants. A high rate of atmospheric pollution is normally registered there from May through August, which forces the adoption of emergency measures. (Madrid EFE in Spanish 2157 GMT 7 Jun 94)

Santiago's residents on 10 June observed a strict plan of "environmental preemergency" implemented by the authorities because the level of harmful suspended particles in the atmosphere surpassed 300 micrograms per cubic meter. This level, the first such registered this year, is dangerous for human health. It was therefore decided to halt 109 industries, to increase the restriction on vehicles by 40 percent, and to forbid the burning of mineral coal and firewood in homes. The Transport Ministry and the Carabineros are in charge of ensuring compliance with the program. (Madrid EFE in Spanish 2013 GMT 10 Jun 94)

Peru

On 13 June, Mario Quevedo, president of the Alexander Von Humboldt National Forest Project, reported that 500,000 hectares of forests have been devastated in the Peruvian Amazon in the past five years. The main reason is the expansion of coca plantations promoted by drug trafficking. Quevedo said that as this deforestation continues, the Ucayali region's forests will disappear. These forests include more than 30 percent of the Peruvian Amazon. (Madrid EFE in Spanish 1812 GMT 13 Jun 94) bs/

ARGENTINA

Cavallo Presents Mining Environmental Protection Bill

PY1806015994 Buenos Aires NOTICIAS ARGENTINAS in Spanish 1105 GMT 17 Jun 94

[Text] Buenos Aires, 17 Jun (NA)—The government has presented a mining update and mining environmental protection bill, eliminating the state monopoly on radioactive minerals and providing a legislative framework for environmental reclamation in a highly contaminating activity.

In addition to ending the state monopoly on the mining and marketing of radioactive minerals that has been in effect since 1956, the bill is aimed at changing about 20 National Mining Code articles.

Upon presenting the bill, Economy Minister Domingo Cavallo emphasized the significance of adjusting the legislation that governs this activity in order to facilitate investment in an area that requires significant capital.

Cavallo said: "More than 60 large international companies, which committed themselves to investing \$1.5 billion, have been establishing themselves in our country."

Concerning this data, the minister noted: "This is the best way of promoting the development of regional economies."

The ceremony to present the bill was held on 16 June in the Economy Ministry's Padilla Hall. Present at the ceremony were Mining Secretary Eduardo Angel Mazza and Natural Resources and Environment Secretary Maria Julia Alsogaray.

Manuel Mondino, the National Commission for Atomic Energy (CNEA) chairman, was invited to the ceremony but sent a letter expressing his support for the bill.

During the ceremony, Mazza was the only official who addressed, although superficially, the significance of eliminating the state monopoly on uranium and thorium.

Concerning this point, the mining secretary merely admitted: "It is a very sensitive issue." He emphasized: "We have the CNEA's agreement."

For her part, engineer Alsogaray ended her brief speech by emphasizing: "Environmental problems cannot be solved unless economic factors are correctly interpreted."

Despite the removal of the current monopoly on nuclear elements, the state, through the CNEA, will police and monitor these activities and advise provincial organizations.

The companies interested in mining activities will present an environmental impact statement in order to receive an Environmental Certificate for a period established by this law's regulations. The Environment Certificate will be issued by the appropriate provincial authorities.

In addition, those who will exploit mines with radioactive minerals will present a program on the reclamation of the natural areas affected by the waste material.

BOLIVIA

New Radio Station Emphasizes Preservation of Environment

PY1706222794 Santa Cruz EL MUNDO in Spanish
6 Jun 94 p 2

[Text] A new radio station, "Amazonas 107.9" has been established in the Santa Cruz area. The station will emphasize preservation of the regional environment.

The station's director, Raul Paniagua, stated that in view of the ongoing contamination of food, water and air, this station will grant time to all those involved in the preservation of natural resources.

Paniagua requested assistance in obtaining materials, training and transfer of technology. He also reported that the transmitter is located in the Oriental neighborhood and the telephone number is 425976.

BRAZIL

Greenpeace Combines Environmental Action, Dialogue

94WN0279A Rio de Janeiro ECOLOGIA E
DESENVOLVIMENTO in Portuguese No 38 Apr 94
(Supplement) pp 13-16

[Interview with Greenpeace-Brazil executive director Rubem Almeida, by Marcelo Monteiro; place and date not given]

[Text] *The executive director in Brazil for one of the world's most famous environmentalist NGO's [nongovernmental organizations] defends the combination of direct action and dialogue with the polluters of the environment as an ideal type of ecological action.*

Recognized by the public for its clashes with those destroying the environment, the nongovernmental organization Greenpeace also intends to prioritize dialogue with polluting governments and business firms to solve environmental problems. According to the executive director of Greenpeace in Brazil, anthropologist Rubem Almeida, even with that orientation, the interceptions of vessels carrying toxic cargo, the occupation of nuclear power plants, and the presence of activists between whales and fishing boat harpoons remain the "spearhead" of the NGO strategy.

Direct action as a means of protesting the destruction of the environment has been a hallmark of Greenpeace since its foundation in September 1971. At that time, 12 activists took off from a Canadian port for the purpose of condemning the nuclear tests conducted by Richard Nixon's United States off the Alaska coast. The initiative was successful, gaining wide popular support and the suspension of atomic tests in the region.

Since then, the activists' daring has helped to convert the ecological issue into one of the world population's main concerns. Included among the organization's conquests are the cancellation in 1975 of the atmospheric nuclear tests

being carried out by France, the 10-year worldwide moratorium on whale hunting starting in 1982, and the permanent prohibition of waste incineration on ships beginning this year.

On some occasions, the Greenpeace supporters aroused the anger of governments and businesses that felt harmed by environmental protection. The original vessel, Rainbow Warrior, was sunk on 10 July 1985 in the port of Auckland (New Zealand), with bombs set by two French secret service agents.

The ship was taking part in a campaign against the French nuclear tests on Pacific islands. The Portuguese photographer, Fernando Pereira, was killed in the attack. Thanks to compensation paid by the French Government, and the cooperation of thousands of people, the organization purchased the present Rainbow Warrior, one of the Greenpeace symbols (see ECOLOGIA E DESENVOLVIMENTO, No 19).

With nearly five million members throughout the world, an annual budget of \$150 million, and offices in 30 countries, the organization is attempting to consolidate its structure in the Third World, dealing with the specific problems of the developing nations. Latin America is the first destination of the project being carried out by the organization, which already has five offices in the region: in Mexico, Guatemala, Chile, Argentina, and Brazil (with branch headquarters in Rio and Sao Paulo). Rubem Almeida has held the Greenpeace executive director's position since the NGO's establishment in Brazil three years ago. An anthropologist and social scientist trained at Sao Paulo University, Rubem lived for seven years in Guarani communities in Mato Grosso do Sul, Sao Paulo, Rio, and Paraguay. "I speak better Guarani than English," he comments.

In an exclusive interview with ECOLOGIA E DESENVOLVIMENTO, he explains the organization's strategy for environmental protection, reveals the NGO's objectives in Brazil, and blames the Brazilian State for the failure of most of the government's environmental projects.

Monteiro: Greenpeace is known for its "direct action," such as the interception of ships, seizure of toxic cargo, occupation of power plants, etc. Is nonviolent attack on polluters still the best defense of the environment?

Almeida: I wouldn't say that it was necessarily the best method. Direct action still persists as a means of calling attention to environmental problems. It's the spearhead of a campaign. Ecological militancy has undergone deepseated changes. A few years ago, direct action could be taken, attracting the attention of the public which, in turn, would pressure the polluters. In this way, we succeeded in changing the situation. Nowadays, the process is more sophisticated. Many polluting business firms practice what Greenpeace calls "green fraud": they include in their staffs individuals specializing in the ecological field, who attempt to legitimize and conceal the problems caused by the firms.

In the case of Greenpeace, there is a clearcut aim of revealing to the public not only its direct action, but also what underlies it: the process of research, investigation, and

procurement of accurate information on the issues treated, so as to have grounds for action and to allow for dialogue with the polluting companies' "experts."

Monteiro: That type of action with grounds requires a very well-consolidated structure. How is Greenpeace organized to meet its objectives?

Almeida: We have in Greenpeace technicians, scientists, and specialists who produce a large volume of studies on ecological issues. When the organization lacks specialists on a particular subject among its members, we hire consulting firms. During the entire process of producing information, Greenpeace attempts to make use of individuals who are most knowledgeable on the subject. I regard this concern for having grounds for condemnation as one of the fundamental features of the organization's activity. Without that type of procedure, we would have neither credibility nor legitimacy for making a condemnation.

Monteiro: How do the polluting governments and business firms usually react to Greenpeace's action?

Almeida: It's strange, but we don't always encounter negative reactions. Greenpeace has even had a good reception from the Brazilian Government, as well as from business firms. We often receive requests for interviews and meetings from representatives of the companies that we are fighting. The organization has a policy of diplomacy in Brazil. We aren't interested in direct action alone, but also in dialogue, so that space will be opened for the discussion of proposals and options to solve environmental problems.

Monteiro: Greenpeace doesn't accept donations of funds from governments or political parties. What kind of relationship should exist between the environmental NGO's and the government?

Almeida: The government should attempt to do what the NGO's are doing: that is, try to solve problems, so as to improve the population's quality of life. Since the government in Brazil doesn't pay attention to the society's demands, the importance of the nongovernmental organizations is greater. In international forums, Greenpeace's effort has been an attempt to prompt governments to assume favorable attitudes toward preserving the environment. At international meetings, we attempt to demonstrate to the authorities the measures that need to be adopted.

But it is impossible to substitute for the government completely. As a space is opened, it is advantageous for the NGO to occupy it, participating in the solution to problems as a member of the civil society. However, the government must do its share.

Monteiro: Oddly enough, the Greenpeace headquarters in Rio is located opposite the American Consulate. Can the United States still be considered the major villain in the environmental area, as it was on the occasion of Rio-92?

Almeida: The United States' world leadership exists on nearly all levels and, owing to that position, it wields an influence over the other countries. At Rio-92, with respect to the accords on biodiversity, ex-President George Bush really had a position far more reactionary than that of other

rulers. But I think that this villain role is circumstantial. Sometimes, France appeared as the major villain, with its nuclear tests; on other occasions, it was the ex-Soviet Union, with its waste disposal in the Sea of Japan.

Monteiro: Nearly two years after the convening of Rio-92, do you think that the meeting brought concrete benefits for the environment and for the planet's inhabitants?

Almeida: I think that the greatest result of Rio-92 was the confirmation of the civil society's need to become better organized to debate environmental problems. Of course, this discounts the heightened publicity given to ecological issues, and the increased information on the subject. From the standpoint of a real change in governments' attitudes toward the environment, no significant progress occurred. One exception was the issue of biodiversity, which advanced a little more when the Clinton government signed the convention, a year and nine months after the conference. In short, it is difficult to cite palpable results.

Monteiro: Greenpeace has offices in Guatemala, Mexico, Chile, Argentina, and Brazil, in both Rio and Sao Paulo. What is Latin America's significance to the organization's international leadership?

Almeida: Greenpeace's installation in the Latin American countries is a new project. It's the first step that international Greenpeace has taken to leave the North and move to the Third World countries. The significance of the Latin American project within the organization is that it may change the external manner in which the underdeveloped countries' environmental problems are being treated. We cannot deal with the ecology of the Latin American countries in the same way as in the First World. The problems are different, and there are other difficulties.

In the specific case of Latin America, there is a direct link between the environmental problems and the socioeconomic, and even political difficulties. At the meetings of the Greenpeace representatives in the 30 nations, not only the Latin American delegates, but also those from other countries, such as Ukraine, Russia, and Japan (which have no strong ecological tradition) bring up new questions. And Greenpeace, which is intended to be a planetary organization, has rightfully attempted to combine different views of the world.

Monteiro: Should the damage caused to people by pollution and deterioration of the environment be viewed as a kind of violation of fundamental human rights?

Almeida: Unquestionably. Greenpeace is concerned fundamentally with life in all its forms, understandably prioritizing human life. In the large Brazilian cities, with Sao Paulo as the most flagrant example, there is a direct correlation between pollution and the incidence of pulmonary diseases, especially in children. The battle against carbonic gas emissions is part of the struggle to preserve basic human rights. I could cite countless examples that would fit into this type of violation, such as the contamination at Chernobyl, and the cesium 137 in Goiania. What one notices in the governments, generally, and those of the Third World,

particularly, is the flagrant devaluation of human life. This constitutes a violation of fundamental human rights.

Monteiro: Do you accept the official argument of lack of funds as an excuse for failure to execute environmental projects?

Almeida: We can't help but admit that there is a shortage of financial resources. But the environmental problem in our country is directly linked to a disastrous tradition of Brazilian administration. The natural and financial resources are in the hands of a profiteering minority, which shows an immense disregard for the lives of others. We shouldn't fail to mention the authorities' neglect as well. This can be observed in the chaotic organization of traffic, the collapse of an overpass such as the Paulo de Frontin, in Rio, during the 1970's, and the security and operational problems at Angra I. A substantial change should occur in the government's orientation, altering the present environmental situation and applying the country's resources and wealth to the promotion of social welfare.

I disagree totally with the view of certain business owners and authorities who claim that the ecologists want to impede the nation's progress. A more precise analysis should be made of the meaning of progress. Brazil needs to develop, but not for the benefit of a very small minority of the population. Development should occur for the majority, who are living on a frightening level of poverty; and it should occur without harming the environment.

Monteiro: Some of Greenpeace's principal causes in Brazil have been the closing of Angra I, the abandonment of Angra II, still under construction, and the termination of nuclear projects for military purposes, such as the nuclear submarine developed by the Navy. How do you analyze the Itamar government's performance with regard to the nuclear issue?

Almeida: When President Itamar Franco was a senator, he held a rather critical position toward the Brazilian nuclear program. Nevertheless, Greenpeace has been analyzing methods of action that would make it possible to shut down Angra I and Angra II. The organization is opposed to any type of nuclear application in the energy area, much less in the military area.

Monteiro: Several Latin American countries, such as Argentina, Chile, Peru, and Colombia, have banned the importing of toxic waste shipments. Could Brazil, which has legislation with loopholes for the entry of such shipments, have become one of the latest "garbage cans" for the developed countries?

Almeida: I think not. And Greenpeace is fighting to prevent this from becoming a reality. The Brazilian legislation on toxic waste really has flaws that legitimize the entry of the shipments, but there is a formal position in the Brazilian Government against that type of business, with the signing of accords on the subject. We must admit that, in the two recent specific cases of toxic waste imports in Sao Paulo, the authorities assumed merely formal, but well-intentioned positions to bar the entry of the shipments. Greenpeace is debating the matter with Minister Ricupero, and we hope that the country will soon close all the loopholes allowing the entry of toxic waste into the national territory.

Monteiro: At least 42 Brazilian Indians were murdered in 1993. What measures should be adopted by the authorities to guarantee the survival of the Indian communities?

Almeida: The first measure that the government should adopt is to become better organized so as to improve relations with the Indian communities, becoming familiar with their cultures. Nowadays, there are nearly 150 Indian languages, representing a diversity comparable to that of the flora in the country. The federal government also needs to make a greater effort to demarcate the land required by the Indians. It doesn't matter to me whether the size of the areas is X or Y. The Indian communities themselves are equipped to say how much land they need for their survival, and the government should follow that advice insofar as possible. After the land demarcation, the government should effectively guarantee the Indians' right to use the areas.

Monteiro: Does Greenpeace have projects with rural or forest communities, providing support or financial resources?

Almeida: Support, yes; financial resources, no; because the organization has no intention of financing. We attempt to establish alliances and to provide complete logistical support to the communities. We have agreements with rubber tree tappers, and with rural communities in Para; and we are supporting the Tupiniquin Indians in Espirito Santo, who had part of their land invaded by Aracruz Cellulose. The Greenpeace leadership advocates the establishment of alliances with rural and Indian communities, and with urban social movements, always with the goal of improving quality of life and combating depredation of the environment.

Monteiro: What are Greenpeace-Brazil's priorities in 1994?

Almeida: We are working on three well-defined campaigns. The priority campaign for the first four months of the year is action against nuclear energy. Our objective is to prompt Brazil to abandon nuclear energy permanently. Another campaign is that involving forests, with two main aspects: The first is against the use of chlorine in paper production and the felling of primal jungles for planting single crops of eucalyptus. The second is against the felling of trees in general, especially those of hardwood, such as mahogany. During October, the vessel MV Greenpeace is scheduled to tour the Amazon River, to publicize the entire issue of deforestation in the Amazon River region. Another possible aspect may be the issue of pollution of the country's northern rivers with mercury used by gold prospectors for separating gold.

The third campaign is that related to climate, against the urban development model prioritizing use of the automobile, with the resultant increase in pollution originating in the burning of fossil fuels. Greenpeace advocates the construction of bicycle paths and investment in mass transportation, preferably electric. The organization is advising on the construction of a bicycle path 120 km long in Ribeirao Preto (interior of Sao Paulo), intended not only for recreation but also for transportation between work and home. The bicycle path will reduce the use of gasoline and diesel powered vehicles in the municipality by approximately 20 percent.

Monteiro: What are the principal activities that international Greenpeace intends to carry out this year?

Almeida: The priorities for the organization's overall activity in 1994 are issues involving the devastation of forests (in Siberia, the Amazon River region, and Canada), disarmament, and the toxic waste business. The Latin American countries are also a target of the mega-cities movement, with emphasis on Sao Paulo and Mexico City, associated with the climate campaign. The issue is a regional priority.

Implementation of National Biodiversity Program Announced

PY1606133694 Sao Paulo GAZETA MERCANTIL in Portuguese 8 Jun 94 p 12

[Article by Lilian Bem David]

[Text] The main objective of the National Biodiversity Program that the Ministry of Environment and the Amazon Region will set in motion in Rio de Janeiro on 17 June is to obtain a more detailed knowledge of the living organisms existing in Brazil, which represent 15 percent of all the living organisms in the world, and to explore their sustainable use. "We want to open a registry based on proposed projects," Brazil's Secretary for Environmental Affairs Haroldo Mattos de Lemos said yesterday in Porto Alegre. Mattos de Lemos attended the 7th State Environmental Conference (Confema), which was sponsored by the Rio Grande do Sul government and the State Foundation for Environmental Preservation (Fepam) with the support of Germany's GTZ [expansion unknown] environmental agency.

Lemos reported that 30 million living organisms are believed to exist on the planet, but that only 1.5 million are scientifically known, while approximately 100 species are eliminated or lost every day.

The government has already guaranteed the provision of \$48 million for financing the National Biodiversity Program, of which \$30 million were granted by the World Bank (IBRD) and will be transferred through the Global Environment Facility (GEF). Lemos said: "The priorities for allocation of the funds have not yet been defined. The idea is to establish practical partnerships between the government, the private sector, and the civil sector." No budget limits have been set for individual projects, he added.

At the end of May, Lemos attended a meeting of the United Nations commission for supervision of compliance with the decisions made by Eco-92 [United Nations Conference for Environment and Development], which was held in Rio de Janeiro. He believes progress has been made in the implementation of conventions on biodiversity and climatic change, which have already been enforced. "There is consensus on the registration of patents for the protection of intellectual property, while developed countries are willing to share the profits with the countries from which genetic resources are obtained for research," he said.

Negotiations are moving more slowly over the increase from 0.33 to 0.7 percent of GDP from the rich countries that

should be allocated to environmental preservation in the developing countries. "In the case of Brazil, it is also necessary to interpret Agenda 21 in terms of local features, as has been done in China, which set goals for the next century," he said. This will be one of the main missions of an interministerial council that the federal government intends to create to set the rules for sustained development in Brazil.

Lemos briefed Confema delegates on the operation of the Decentralized Implementation Program, which was agreed upon with the IBRD three weeks ago. The program will allocate \$61 million (70 percent of which will be provided by the IBRD) for environmental projects that will be picked up by the Ministry of Environment and the Amazon Region and by registered state governments. The states that intend to register for the program will have to meet at least seven requirements, some of which are compulsory: preparation of environmental legislation consistent with the Constitution, creation of a state environmental council (a requirement that Rio Grande do Sul has not yet met), the issuance of environment permits for large undertakings, and the creation of legal advisory services to advise the population on environmental matters.

Each state may strive to obtain funds for up to six projects over a period ending 30 March 1995. Funds will be transferred directly to the municipal governments involved.

Slow Loan Negotiations Harm Environmental Projects

PY1706155894 Sao Paulo GAZETA MERCANTIL in Portuguese 14 Jun 94 p 18

[Article by Francisca Stella Faga datelined Sao Paulo]

[Text] The Brazilian Government has already spent more than \$1 million preparing projects for the Amazon region to be financed under a pilot program of the G-7 countries—the seven most developed countries in the world. Yet, the Rain Forest Trust Fund, which is administered by the World Bank, yet to disburse a single cent from the \$1.5 billion promised by the G-7 in 1990.

This was one of the many examples cited yesterday in Sao Paulo by Sergio Amaral, chief of the Finance Ministry staff, who until recently served as the Environment Ministry's main coordinator of negotiations for financing environmental projects.

Amaral believes the long list of failures to use the resources committed by organizations like the World Bank and the G-7 shows "Brazil is perhaps not fully capable of taking advantage of the opportunities created in this field, which today ranks high on the international agenda," despite the fact it has "turned the pressure exerted against us into a political victory."

Commenting on the Amazon Pilot Program, Amaral noted that the problem does not lie only in the delay in disbursing the resources donated to the Brazilian Government, but in the fact that G-7 member countries have suspended their bilateral cooperation because they were already committed to the multilateral program. Brazil thus lost cooperation at

bilateral level without being compensated through disbursements from the above fund. He said the World Bank has spent \$500,000 from the trust fund in financing missions and in disseminating information on a program that still remains on paper.

The General Environment Facility (GEF)—which has been administered by the World Bank since 1990 and which finances projects to avoid global warming and to preserve biodiversity, international waters, and the ozone layer—should be another major source of resources. The GEF had \$1.2 billion. It allocated \$30 million to Brazil in 1991. During a lecture at the Institute for Advanced Studies at the University of Sao Paulo, Amaral noted that Brazil had submitted seven projects in 1993, but nothing has yet been disbursed.

No private donations have come to Brazil through the debt conversion mechanism, Amaral added. He noted that more than \$80 million was rapidly obtained in Bolivia in this way. Brazil was slow in making this operation feasible and its legislation was inadequate, and so the value of debt bonds rose and nothing happened, he said.

Amaral cited as another failure the case of the National Environment Program (PNMA), which was created in 1990. Three years later, in December 1993, the PNMA had disbursed only \$20.5 million of the \$117 million promised by the World Bank.

Amaral blames these poor results largely on the way Brazilian political instability, the fiscal crisis, and inflation have affected international cooperation. Brazil has been unable to use many loans granted under advantageous conditions because the Treasury has not authorized the respective matching funds.

Amaral also charged that Brazilian Government organizations were not prepared to negotiate and absorb the volume of foreign resources that become available since the mid-1980's.

IBAMA [Brazilian Institute for the Environment and Renewable Natural Resources], which was created in 1989, has experienced a high managerial turnover: It had nine presidents in just four years. The Environment Secretariat, which later became the Environment Ministry, has had six different heads since 1992. IBAMA has not had trained teams either.

Amaral noted there has been poor planning, overambitious managers with unrealistic goals, imprecise projects, unrealistic deadlines, and extremely complex bureaucratic paperwork. One project involving environmental management and technology that would have received \$25 million had to be discontinued because it was not possible to clearly define its objective.

Amaral believes the Brazilian Government was not the only one that made mistakes. He said: "The World Bank's technical teams markedly increased their demands, were counterproductive, and unduly interfered with the planning and implementation of projects."

He noted that in the case of the PNMA, the IBAMA director for ecosystems had to prepare seven different versions of an annual operations plan for conservation units to meet the World Bank's successive demands.

This delayed the program and discouraged the Ibama experts' team. To avoid canceling the bidding that those who were coordinating the program had prepared together with the World Bank, a manual on documents and standard procedures for the biddings was approved by the bank after several months of discussion. When tested for the first time in an international bidding for the purchase of informatics equipment, however, the procedures were rejected by the World Bank. To everyone's surprise, the bank preferred INCRA [National Land Reform and Settlement Institute] procedures.

Amaral said the experiment with the Pilot Program for the Amazon Region is even more frustrating. The World Bank, which is used to large projects, has been having difficulties in organizing small projects with the participation of the local people. Just as the negotiations are about to be concluded, new demands are frequently made and guidelines modified during the negotiation process.

In a meeting held at the end of March in Brussels to evaluate the Pilot Program for the Amazon Region, the Brazilian Government did its best to show how these issues harmed the decisionmaking process. The World Bank reaction was positive, admitting that procedures should be expedited.

CUBA

New Society To Promote Renewable Energy Resources

FL2306161294 Havana Radio Reloj Network in Spanish
1952 GMT 22 Jun 94

[Text] Cubasolar, the Cuban Society to Promote Renewable Energy Resources, has been established in Havana to educate and promote the use of renewable energy resources. Dr. (Luis Perris Perez), president of [word indistinct], said that this new nongovernmental organization wants to help solve economic and social problems by implementing scientific and production developments. (Perris Perez), a specialist from the Cuban Solar Energy Research Center, added that the goal is to diversify existing resources by using biomass, biogas, hydraulic, sea, wind, photoelectric, thermal, and [word indistinct] technology. Cubasolar will have branches in all provinces. Its membership categories include: founding, active, adjunct, associate, contributing, and (?golden).

INDIA

Government Approves Industrial Pollution Control Project

BK2306094094 Delhi THE HINDUSTAN TIMES
in English 19 Jun 94 p 12

[Text] New Delhi, June 18—The Centre has approved a \$330 million industrial pollution control project to prevent and alleviate environmental degradation caused by industrial operations in the country.

The World Bank is providing a credit of \$ 143 million and the remaining \$187 million is to be provided by the Centre and State Governments.

The project is being undertaken as Phase II of a similar project of \$ 263.6 million undertaken with World Bank credit of \$ 155.6 million. The first phase launched in 1991 was scheduled to be completed in 1997. Since the project was completed this year itself, the Phase-II has been taken up.

The first phase covered Tamil Nadu, Gujarat, Uttar Pradesh and Maharashtra. A major component of this project was the investments under which loans were disbursed to individual industrial units for setting up pollution control equipments. These loans accounted for \$100 million while \$12.6 million were spent to strengthen the State pollution control board.

IRAN

Rafsanjani Calls Environment 'Duty for the Modern Man'

LD1206164494 Tehran IRNA in English
1607 GMT 12 Jun 94

[Text] Tehran, June 12, IRNA—President 'Ali Akbar Hashemi-Rafsanjani said here today that preservation of the environment and appropriate exploitation of natural resources was a duty for the modern man.

The president in a meeting with the managers and model workers of the Environment Protection Organization said the uncontrolled expansion of industry in the world and inappropriate use of the natural resources have brought about environmental crisis at the international level.

"Continuation of this process will seriously jeopardize the life of man and other creatures," he said, adding that protection of the environment should always be given a priority in implementation of industrial projects.

Before the president's remarks, vice-president and head of the Environment Protection Organization Dr. Hadi Manafi said compilation of a plan on the national strategy and sustainable development began in February 1993 with the help of 100 Iranian experts.

"The plan has been praised and approved by the UNDP [United Nations Development Program] and World Bank," he said.

Crans Montana Forum Discusses Caspian Sea Environment

LD2006161694 Tehran Voice of the Islamic Republic of Iran in English 1130 GMT 20 Jun 94

[Unattributed commentary]

[Text] In the final session of the international seminar of Majma' Foundation [Crans Montana Forum in Geneva] on 19 June the issue of the Caspian Sea and regional cooperation was discussed and surveyed. The participants in this session called for the protection of the living environment as a vital factor in cooperation in this region.

In this session, the Georgian prime minister, the oil minister of the Islamic Republic of Iran, the information minister of Azerbaijan, and the representative from the Russian parliament constituted the members of the board of directors; and with the UN representative in Geneva, as chairman of the closing session, all made speeches and discussed regional cooperation in the Caspian Sea. The UN representative, Mr. (Petrovski), in his remarks, described the regional cooperation as significant and said: During the Cold War era the regional organizations were totally isolated. However, under the present conditions the United Nations supports the activities of the regional organizations; and for the creation and establishment of an appropriate contact between these organizations and the United Nations, it would be appropriate for a UN agent to be in contact with the said organizations.

Iranian Oil Minister Gholam Reza Aqazadeh-Kho'i then made a speech and stated: Before taking any measures it is better for the leaders of the littoral states of the Caspian Sea to determine in a session the region's living environmental problems and study the kind of appropriate cooperation with the United Nations.

It is to be added that in the past the Caspian Sea did not witness much economic activity due to it being surrounded by Iran and the former Soviet Union. However, with the collapse of the former Soviet Union and independence of the new states, the five littoral states of the Caspian Sea were placed in a new situation. This historical change was a turning point that emerged in the new history of the region's political geography, and as a result the countries neighboring the Caspian Sea found they needed motives for planning aimed at regional cooperation and better utilization of the significant economic sources in the Caspian Sea. On this basis the Islamic Republic of Iran has so far taken long strides in activating regional cooperation, including formation of the Caspian Sea States' Cooperation Organization, initiated by the Islamic Republic of Iran.

At present, attention to the preservation of the living environment and planning in the field of proper fishing in this sea seems to be a must, for living environment pollutions, the local residences' greed, and the administrative corruption of the northern states of the Caspian Sea have all exposed various aquatic species in the Caspian Sea to the threat of annihilation. In case uncontrolled fishing in the Caspian Sea continues, within the next five years all fish species in this sea will be annihilated.

Today Russia, Azerbaijan, Turkmenistan, Kazakhstan, and Iran share the Caspian Sea sources. The Islamic Iran, however, is the only country which produces the least amount of pollution in this sea. At any rate, what has been referred to in the closing session of the Majma' Foundation confirms the point that proper utilization of the valuable sources of the Caspian Sea lies in the close and effective cooperation of the Caspian Sea littoral states. It is only in that case that effective measures can be taken to preserve the living environment of the Caspian Sea.

ISRAEL

Environment Ministry Says Waste Water Polluting Sea

TA1006150794 Tel Aviv HA'ARETZ in Hebrew
10 Jun 94 p A6

[Report by Gabi Zohar]

[Excerpts] Dozens of local authorities and plants spill sewage and sludge containing dangerous substances into the sea, according to a document issued by the Environment Ministry's Sea and Beaches Department. Several local authorities have permission to dump sewage, but others deviate from the conditions imposed on waste water spills and an investigation has been opened against them.

Dr. Ilan Lamster, who prepared the document, says the pollution is pinpointed and that the most dangerous sites are the Nahariyya and 'Akko beaches, and the Qishon river, as well as the Elat and Dan region waste waters.

Dr. Lamster believes that within five years waste water from plants and local authorities will be processed through purification installations, which will prevent sea pollution.

The document notes that the Israel Electric Corporation spills waste water from the Haifa, Hadera, Reading, Ashdod, and Ashqelon power stations, including sea water containing a 0.2 milligram concentration of chlorine for cooling purposes, which meets Environment Ministry standards. The company presented a multiyear master plan to the Environment Ministry to prevent future sea pollution. [passage omitted]

The document criticizes REFA'EL [Armament Development Authority], which transfers its poisonous wastes to the Ramat Hovev site while getting rid of its sewage through the nearby sewage system. [passage omitted]

According to the document, Hadera, Netanya, and the Central District are currently working on new purification installations which promise to end the pollution of the Poleg stream. Nahariyya and 'Akko still dump sewage into the sea, but even they are working on a plan to stop the flow of unpurified water. The document notes that Elat's sea water is polluted and Elat Municipality is currently on trial for spilling sewage into the sea without permission. The document also said that after a year of negotiations with the Environment Ministry, the Dead Sea Works and the Sedom site presented requests for permission to dump waste water into the Dead Sea. [passage omitted]

RUSSIA

Decommissioned Submarines Said To Pose Radiation Threat

MK2306103594 Moscow NEZAVISIMAYA GAZETA
in Russian 23 Jun 94 p 2

[Report by Valeriy Batuyev under the "Problem" rubric: "Outcasts' Wait for Somebody To Take Care of Them. Delay Fraught With Danger"]

[Text] Russia never had nuclear submarines in the Black or Baltic Seas. So after the Soviet Union broke up none of them was inherited by the former Union republics. Over the next few years Russia alone will have to recycle more than 200 of these craft containing a considerable quantity of radioactive waste. This is required by both START-II and the fact that the service life of the submarines, many of which are still afloat, has come to an end. But it turns out that at present Russia still cannot comply with START-II promptly, in an environmentally clean fashion, and at the same time to its economic advantage: There is no appropriate technology that can be universally applied. There are programs and government decrees, but extremely poor financing hinders their implementation. The recycling of submarines is a loss-making process. In addition, the Navy—the latest owner of the equipment, although technically it is owned by the State Committee for the Management of State Property—does not keep track of the degree to which all required parts of the equipment are present. It is received for recycling without parts and circuits containing nonferrous and precious metals, such as gold, silver, and copper.... In addition, the recycling has to be done by the so-called "roundabout" method: After a submarine is placed on the stocks, the reactor compartment is cut off, but associated redundant compartments are retained. The reactor compartment is then sealed and thrown into the water. Hence the term "outcast." They will remain in the water until the Defense Ministry builds long-promised storage facilities for them. The Defense Ministry, in turn, is waiting for money from the state to do so.

Currently there are around 30 nuclear submarines and "outcasts" subject to recycling underwater near large cities, such as Severodvinsk and Bolshoy Kamen, and the village of Snezhnogorsk. Each of them is kept afloat thanks to municipal electric power, thus causing economic damage to the state. Once the power is turned off the "outcasts" will run aground, and the possible seal failure (after 30 years in service) may cause a discharge of radioactive waste. Each submarine (of the earlier types) contains 300-400 cubic meters of radioactive waste measuring from 100,000 to 1 million curie, whereas the safe level for discharging such waste into the water stands at 10 curie (to the power of minus nine). The overall quantity of radioactive waste awaiting recycling has been estimated by specialists at 2,200 cubic meters in Severodvinsk, 2,000 cubic meters in Bolshoy Kamen, and 93 cubic meters in Snezhnogorsk. In the coming years another 200 or so submarines will be decommissioned in the Navy.

New Cosmodrome: Environment Hazard Denied

PM2306125594 Moscow ROSSIYSKIYE VESTI
in Russian 23 Jun 94 p 5

[Article by Colonel General Vladimir Ivanov, commander of the Russian Federation Military Space Forces, in response to readers' letters: "There Will Be a 'Baykonur' on the Banks of the Amur"—first paragraph is introduction]

[Text] As ROSSIYSKIYE VESTI has already reported, one of the aims of the Russian president's working visit to the Far East was to visit the city of Blagoveshchensk, near which it is planned to construct a new cosmodrome. Boris Yeltsin supported the idea of creating a "new space dock" in Amur Oblast, putting an end to the debate. But the editorial office continues to receive letters from various organizations and from the inhabitants of Amur Oblast worried at the possible deterioration of the ecological situation in connection with the operation of the "gates into space." Our special correspondent Semen Ivanov asked Colonel General Vladimir Ivanov, commander of the Russian Federation Military Space Forces, to answer our readers' questions.

Today Russia's future in space is under serious threat since a considerable proportion of the space infrastructure remains outside Russia. The Russian Defense Ministry and other ministries and departments are doing everything to ensure that Russia has the opportunity, independently of other states, to engage in space activity. Thus, for about two years now the military space forces have been controlling satellites only from Russian territory. Previously space command complexes in the Republic of Kazakhstan, Uzbekistan, and Ukraine were enlisted for the purpose. The situation with regard to launches of Russian satellites into space has become more complex. The world-famous Baykonur cosmodrome from which about half of all launches under Russian space programs are carried out remains in the Republic of Kazakhstan.

A number of agreements have been concluded between the Russian Federation and the Republic of Kazakhstan determining the procedure for the cosmodrome's joint use. But they are of a provisional nature. The need has arisen for a new cosmodrome in Russia's southern latitudes capable in the long term of replacing Baykonur.

The choice of location for the new cosmodrome in Amur Oblast was a careful one. Out of many options we settled on the region of a missile division in Svobodnyy city. It is on almost the same latitude as Baykonur and has a developed infrastructure. There are highly skilled specialists serving in the division, many of whom have agreed to continue to serve in the Military Space Forces.

By the Russian Federation Government's 11 December 1993 decree no. 1282 "on state support and backup for space activity in the Russian Federation" the Defense Ministry in conjunction with the Russian Federation State Committee for the Defense Sectors of Industry, the Russian Space Agency, and the Russian Federation Ministry of the Economy and Ministry of Finances was instructed to elaborate and submit to the Russian Government proposals for the development of the Plesetsk cosmodrome and the creation of a cosmodrome in Russia's Far East region. These

proposals, which provide for the selection of a site for the cosmodrome in the region of Svobodnyy and the implementation of initial planning and surveying operations and planning and design developments, have been prepared. The question is being examined with a consideration for all factors, including the interests of the state, the comprehensive development of the Far East region, ecology, and many others. But the island's inhabitants are worried at the possible ecological consequences of the cosmodrome's creation. Fears are being voiced that the results of its operation are comparable with the Chernobyl accident and rocket launches will lead to the destruction of the Zeyskiy hydroelectric power station and life on the oblast's territory will become extremely dangerous.

I state categorically that all these fears have no serious foundation. The creation of the cosmodrome will not generate any "drastic deterioration" of the ecological situation in Svobodnenskiy Rayon or Svobodnyy Oblast.

That is borne out by the experience of the operation of the Baykonur and Plesetsk cosmodromes and of foreign cosmodromes. Moreover, one of the largest U.S. cosmodromes is situated in Florida, which is a resort region of the United States. I visited this cosmodrome with a group of Military Space Forces officers and we saw for ourselves that the cosmodrome had no adverse effect on the environment.

The functioning of cosmodromes differs little from medium-size industrial establishments. Discharges of the products of combustion from rocket fuel from the rockets launched from the cosmodrome are insignificant against the overall background of pollution from transport (trucks, diesel trucks, aircraft, and so forth) and the discharge from industrial enterprises. And during launches the destruction of the Earth's ozone layer is assessed for all rockets launched in the world at about 0.00001 percent of the total impact of man's activity. The cuts in the ozone layer when rockets are launched are closed within 40-50 minutes.

The space rocket complex which it is planned to use at the first stage of the cosmodrome's creation in no way differs from those previously in operation in terms of the nature of its effect on the environment. And the number of these previous complexes is being reduced several dozen times over. It is of some importance that these rockets, into which a large amount of people's labor has been invested, will not be thrown on the garbage heap but will benefit the national economy, putting payloads into space.

Later it is planned to use the new "Angara" launch vehicle at the cosmodrome. Its fuel, kerosene and oxygen, present no danger to man and nature. Nor is there a radiation threat from the cosmodrome's activity since there are no radioactive materials in existing or future launch vehicles and space ships. The so-called fall zones for launch vehicles' stages which have become spent in orbit are usually hundreds of kilometers from the launch site, in sparsely populated regions. These use of these regions is sporadic and occurs only on condition that special agreements (contracts) are concluded with the local organs of power. Here an essential condition is the collection and removal of the fragments of the stages from the regions where they fall. When creating

the future launch vehicle for use at the Svobodnyy cosmodrome we set the task of working out the possibility of doing away completely with these fall regions and returning the stages to the launch site.

I am far from claiming that a large establishment like a cosmodrome has no impact at all on the life of the region. The construction of establishments and primarily the launch complex will be developed and the quantity of transport and fuel and energy supply establishments will increase. But a number of nature conservation measures are already envisaged.

An ecological survey of the site area has been carried out. A comprehensive program of ecological safety and nature conservation is being developed for the creation and operation of the Svobodnyy cosmodrome.

A service for the ecological monitoring of the state of the environment has already been created at the cosmodrome.

Many years of observations and studies in our country and abroad attest that cosmodromes do not have an unfavorable impact on the health of the population. Even when the heaviest launch vehicles are being launched the size of the health protection zone is no more than a few kilometers. In this connection the question of any resettlement of the region's inhabitants is quite unfounded. Everyone can continue to live and work peacefully in their customary places.

A number of letters emphasize the alleged "heightened seismicity" of the region and the possibility of connected catastrophic consequences from rocket launches. According to the conclusion of the Russian Defense Ministry's leading planning and construction institute, in accordance with existing norms this region is a region of force five seismicity, the minimum for Russia, and is not seismically dangerous. Otherwise the Zeyskiy hydroelectric power station would not have been erected here and further stations would not be planned. As for the impact of rocket launches on the alteration of the seismic situation, many years' practice of space activity does not confirm such an impact.

The territory planned for the cosmodrome is on land allocated to the Defense Ministry in the region of Svobodnyy by state act no. 20 of 2 November 1983. No increase in the territory occupied by the Defense Ministry will be required. Right now a technical and economic feasibility study of the boundaries of the cosmodrome is being completed and the Military Space Forces will submit its materials to the oblast and rayon committees for land resources and land use measures for amplification of questions of land use. The completion of the recultivation of land previously occupied by the establishments of the missile division here is planned this year.

The creation and operation of the new Russian cosmodrome will be backed up by the Main Center formed within the Military Space Forces on the basis of the reduced missile division. We and the Main Center command are receiving suggestions from numerous organizations and individuals anxious to take the most active part in the cosmodrome's creation and operation. Naturally under today's conditions

we cannot satisfy these requests in full. But we like such enthusiasm and we are deeply grateful to the people who display it.

In working on the question of creating the cosmodrome the Military Space Forces consider all factors connected with this responsible business. And of course the attitude of the oblast inhabitants toward this project is extremely important. It seems to us that if work is developed on the Svobodnyy cosmodrome, Amur Oblast and the Far East region as a whole would acquire powerful impetus for their development in the economic, social, and cultural spheres and key questions of employment and the loading of production facilities, the development of the infrastructure, the use of new scientific and technological achievements, and many others would be resolved. The creation of the new Russian cosmodrome is a task of state importance on whose solution depend Russia's defense capability, the efficiency of its national economy, and the prospects for developing Russian science and international cooperation.

Duma Committees Discuss Safe Handling of Nuclear Waste

LD1406172194 Moscow Radiostantsiya Ekho Moskvy in Russian 1500 GMT 14 Jun 94

[Text] Four State Duma committees today held hearings on problems of safety in the handling of radioactive waste. In Russia today there are 14,500 enterprises where there are over 700 sources of radiation. In the opinion of the State Committee for the Supervision of Nuclear and Radiation Safety, the most dangerous enterprises are those attached to the Ministry of Defense and the (Ministry of Atomic Energy). At our request, Nikolay Yegorov, first deputy minister of atomic energy, comments on this. [Begin recording]

Yegorov: Those storehouses where, at present, radioactive waste is being dumped or stored do not satisfy contemporary requirements, in other words those requirements that were made following the Chernobyl disaster and which are in accordance with international requirements. But radiation safety at these storehouses is being monitored and I think—from my point of view—it is normal. Present-day requirements stipulate that storehouses should be protected from air attacks, from natural disasters—earthquakes and a number of other extreme factors. These storehouses do not comply with these requirements because when they were designed such norms did not exist. [end recording]

Soviets Sank Chemical Munitions in Far East

OW1406143994 Vladivostok Radiostantsiya Tikhiv Okean Maritime Network in Russian 0715 GMT 14 Jun 94

[From the "Pacific Ocean" Program]

[Text] In the fifties and the sixties, the Soviet Union sank a large quantity of out-of-service chemical munitions in the northern seas. It was recently discovered that containers with such munitions were sunk in the Far East as well. The chemicals have hydrolyzed and become as thick as jello. They have retained all their poisonous properties although they can no longer be used in regular munitions.

Documents on Moscow Radioactive Waste Sites Reported Lost

LD1306150394 Moscow RIA in English 1046 GMT 13 Jun 94

[Text] Moscow, June 12, RIA—"A considerable part of documents on the clearing up of radiological waste dumps in Moscow was lost, following the dissolution of architecture departments at the former district executive committees," said Sergey Okhrimenko, head of the department monitoring the sources of ionizing irradiation at the State Sanitary and Epidemiological Inspectorate.

Since the 1970s large-scale projects were carried out in Moscow to reveal and eliminate radioactive landfills. In all, 1,200 such landfills grounds were revealed, most of them in south and south-east Moscow. Now that a part of documents has been lost, the sites of these landfills, the volume of work carried out to clear them up and the composition of isotopes influencing changes in the radiation level, are not known. There is a danger of radioactive contamination, especially during new residential construction. Okhrimenko said that they are drafting a special document, called ecological passport of residential and public construction, according to which a package of geological inspection and anti-radiation measures should be carried out in sites of potential residential construction.

Ecology Official Interviewed on New Decree

PM1306115194 Moscow ROSSIYSKAYA GAZETA in Russian 9 Jun 94 First Edition p 4

[Interview with Aleksey Yablokov, chairman of the Russian Federation Security Council Interdepartmental Commission for Environmental Security, by Lada Lyashenko; date, place not given: "Nature Does Not Forgive Carelessness"]

[Text]

Lyashenko: Aleksey Vladimirovich, you have frequently said that it is impossible for any country to have a future if it does not protect the environment. Will the new decree [on Russian Government action plan for environmental protection for 1994-1995] help our environment?

Yablokov: Undoubtedly. This decree is the first step in carrying out the not unknown Edict of the President dated 4 February of this year, which instructed the government to elaborate a specific plan of action for the protection of the environment for 1994-1995 and present a concept for its consistent development by 1 October. The plan of action has been elaborated by the Ministry for the Protection of the Environment together with the Ministry of the Economy, which is very important. For the first time, we are not setting the environment against the economy, but bringing them together. This step signifies the beginning of a new state policy in the sphere of the protection of the environment. After all, policy is when people who adopt decisions look far into the future. The shortcoming of today's politicians is that they most often adopt decisions for today. And after all, the environment is a matter of the future.

Lyashenko: What basic guidelines for the protection of the environment have been elaborated in the government's plan of action?

Yablokov: Primarily international cooperation. We need to determine how Russia fits into global ecological problems, such as the ozone layer, the greenhouse effect, and the protection of the oceans. Equally important are regional problems—Lake Baykal, the Caspian Sea, the Aral Sea, and the Volga. After all, this is not just a matter of individual regions. The health of the population, which is deteriorating disastrously, is a special sphere. Despite the fact that the Ministry for the Protection of the Environment assures us that the situation is improving, there are grounds for concern. In 1993 alone, the average lifespan fell by three years. A boy born this year has no chance of even reaching pension age, since average life expectancy for men by that time will be 59. And after all, our health depends on the environment by approximately 30 percent.

The new decree is also important because all the federal programs and legislative acts named in it have been coordinated with the relevant State Duma committees.

Lyashenko: Will it not turn out that we will once again put off ecological problems till later and our good intentions will be left hanging in mid-air?

Yablokov: Unless we organize constant pressure on the government, and in the mass media too, then nothing will be done. Remember how it all began: The explosion of the ecological movement occurred in 1987-1989, then people forgot about it, and the economic confusion began. Today we have gone back to the original positions, because the burden of the environmental load is so heavy that the country may stumble and there may simply be no economic development. A very great deal in the implementation of the outlined program depends on the regions. After all, the government cannot operate by giving orders any more, like it used to in the past. And indeed this would not work economically: A large part of the money is in the localities.

Lyashenko: Are you satisfied with the normative base of the decree?

Yablokov: On the whole, yes. There are just a few sections of wording that do not suit me. For example, the law on waste from production and consumption. This concept is too broad. I think that we need a law on particularly dangerous waste. That kind of wording is more precise.

Government Decree on Environmental Action Plan

*PM1306120194 Moscow ROSSIYSKAYA GAZETA
in Russian 9 Jun 94 First Edition p 4*

[Decree No. 496 of the Russian Federation Government "On the Russian Federation Government's Action Plan To Protect the Environment in 1994-1995," dated Moscow, 18 May 1994 and signed by Russian Federation Government Chairman V. Chernomyrdin]

[Text] In order to create the necessary conditions for implementing the basic guidelines of the Russian Federation's state strategy to protect the environment and ensure steady

development as approved by the Russian Federation president's edict No. 236 dated 4 February 1994, the Russian Federation Government decrees that:

1. The proposed Russian Federation Government action plan to protect the environment in 1994-1995 shall be ratified as the first stage of implementing the basic guidelines of the Russian Federation state strategy to protect the environment and ensure steady development.
2. Organs of the executive branch of Russian Federation components shall with the participation of the relevant federal organs of executive power be instructed to formulate and ratify regional action plans and work programs in the course of 1994 for the territories involved with a view to implementing the basic guidelines of the Russian Federation state strategy to protect the environment and ensure steady development, thereby defining specific measures to be defrayed by the budgets of Russian Federation components, local budgets, and other sources of finance.

[Signed] Russian Federation Government Chairman V. Chernomyrdin

Note. The Russian Federation Government's action plan has not yet been implemented.

World Bank Supplies Loan for Environmental Projects

*PM1306085594 Moscow ROSSIYSKAYA GAZETA
in Russian 10 Jun 94 First Edition p 3*

[Unattributed report: "Their Dollars for Our Environment"]

[Text] The World Bank has made a decision to grant Russia a loan of \$110 million to implement a series of nature conservation projects. The World Bank is providing \$45 million of that amount on a nonreturnable basis.

This credit issue is the result of more than two years of negotiations with the Bank in which the Russian Ministry of the Environment and Natural Resources played the main role.

In connection with the bank's decision, Viktor Danilov-Danilyan, the head of the ministry concerned, believes that the loan will help to attract Western investors to environmental projects which are being carried out on Russia's territory. The minister said that it is planned to implement these projects in the most environmentally disadvantaged areas of the country and in particular the Lake Baykal region and Tula and Kemerovo oblasts. There is also a plan to create the necessary infrastructure of Russian nature conservancy organs.

The Ministry of the Environment has also announced that the Danish Environmental Protection Fund has made Russia a gift of \$3 million for filter equipment for the Northern Thermal Electric Power Station in Moscow. The introduction of these devices will help to reduce discharges of nitric oxide from 5.5 tonnes to 1.8 tonnes a year and to subsequently close down several dozen boilers operating on obsolete technology.

New Waste Disposal Method Stumbles Over Financial Problems

MK0906114594 Moscow NEZAVISIMAYA GAZETA in Russian 9 Jun 94 p 2

[Andrey Bayduzhiy report in the "Ecology" column: "Russia, a Country Without Dumps? The Security Council Commission Has Approved a New Waste Treatment Technology"]

[Text] On Tuesday, 7 June, a session of the Security Council's Interdepartmental Commission for Public Health Protection (IC) took place in Moscow. It considered the possibility of introducing in Russia a system of processing medical and biological waste using plasma technology.

As is known, waste accumulation is one of the sorest ecological problems in Russia today. The seven incinerating plants operating in the country meet not more than just a small percentage of processing needs. In Moscow alone there are hundreds of unauthorized dumps while the annual volume of waste in Russia is estimated at 7 billion tonnes. The IC session considered an offer from the Plazma-Test joint-stock society to use plasma technology, on which it holds a patent, to reutilize waste. A distinctive feature of this basically new method is that it is absolutely safe from the epidemiological and ecological point of view. As a result of high-temperature incineration under pressure, the processed matter disintegrates into components in the shape of metal and slag. The cycle is completely closed, which precludes any incineration products from getting into the environment. All waste processing products can be reused in industry.

During the discussion IC experts were unanimous that the proposed waste disposal method, as well as the facilities using this technology, are highly efficient and extremely needed for Russia in processing not only medical but also other types of waste. Their dissemination, however, could be complicated by a shortage of funds: The cost of one plant, depending on its capacity, varies from \$440,000 to \$1.2 million. And although the IC recommended that financing the procurement of such installations be included in the federal waste program, a Finance Ministry representative at the session proposed that the requisite funds be taken from the budget of the Public Health and Medical Industry Ministry and the compulsory medical insurance fund. True, making Russia a country without dumps is so far unfeasible not only because of financial but also legal problems. Owing to the absence of requisite laws, and also a weak environmental protection system, the overwhelming majority of enterprises will for a long time to come find it much more convenient to take their waste to dumps rather than pay for an effective but expensive method to dispose of it.

Japanese Aid To Help Construct Radioactive Waste Facility

OW0906055694 Moscow Russian Television and Dubl Networks in Russian 0600 GMT 8 Jun 94

[Announcer-read report over video: from the news segment of the "Dalniy Vostok" program]

[Text] Japan could have begun construction of a maritime complex for the storage and processing of liquid radioactive waste from the Pacific Fleet in Maritime Kray in June

[sentence as heard]. A corresponding intergovernmental agreement has been concluded and construction will be financed from the \$100 million which Japan has earmarked as aid for Russia and the CIS countries for dismantling nuclear weapons. [video shows rundown-looking port facilities, obsolete submarines at wharf]

Selection of a maritime waste storage system was conditioned by the Maritime Kray people's opposition to storage of radioactive substances on land. In this way Tokyo will contribute to speeding up the stalled process of nuclear disarmament in the Far East, particularly where nuclear submarines are concerned, since only the unsolved problem of liquid radioactive waste is hampering their dismantlement. Presently the tanker TNT-5 [on which liquid waste is stored] has been moved from the bay near Bolshoy Kamen village further south to Pavlovskogo Bay.

Foreign, Local Firms Practice Indiscriminate Logging, Ignore Laws

94WN03004 Moscow ROSSIYSKAYA GAZETA in Russian 31 May 94 p 3

[Article by Tatyana Smolyakova based on Greenpeace documents, published under the heading "Ecology": "Our Forests—Their Wealth"]

[Text] The international environmental organization Greenpeace undertook a three-week expedition to the Ussuri taiga. At a press conference held in Vladivostok on the expedition's findings, it was flatly stated that a unique ecosystem is being destroyed, both by Russian and jointly owned timber companies. Furthermore, the trump card of those who support this sort of business, i.e. that it is of tremendous economic benefit to Russia, turns out to be nothing but a bluff, incidentally, something that ROSSIYSKAYA GAZETA has warned about in previous articles. Russia receives only a minimal amount, with the bulk of profits going abroad.

In violation of Russian environmental legislation and a contract signed in 1990 with the Hends Company, enterprises are carrying out extensive clearcuts. It is primarily young and healthy trees that are falling to the axe, with some trees having a diameter of only six seven cm. Not even forests within water protection zones are being spared. Yet thousands of cubic meters of timber are being left to rot at logging sites, because companies are cutting more than they can haul out. The contractual stipulation regarding reforestation within one year after logging is completed is not being fulfilled.

It would not be so bad if all our South Korean friends left behind were wood chips. But the soil and bodies of water are also becoming thoroughly polluted by the petroleum products used in logging equipment. Pollution of spawning rivers has resulted in a 90-percent decline in salmon populations! What word is there but barbarism for that kind of forest use?

But these are foreigners who are completely indifferent to our native soil. It is our own people who work for the Melnichnoye Timber Kolkhoz, yet even there the dollar is king. Cedar is being logged illegally (21,000 cubic meters in 1993). Forests are also being logged in areas that are within

the Sikhota-Alinskiy Preserve and are part of a unified international system of biosphere preserves.

Yet no one seems bothered by all this vandalism except for the native population—not the kray's leaders, and most particularly not the timber industry. And why should they be, when the Japanese are eager to buy wood for \$800 per cubic meter? Even if all the fines imposed are actually paid (last year the timber kolkhoz paid out R130 million in fines), this sort of illegal logging would still be a very profitable business. Particularly when it comes to lining individuals' pockets.

Sadly, ROSSIYSKAYA GAZETA has already come to the defense of the Far Eastern taiga on numerous occasions. Numerous instances of a rapacious attitude toward the environment and criminal sell-offs of our national wealth have been cited. We have reported on clashes between local residents and Korean loggers. Yet the situation is not changing. And clearly it will not change until the locust that is hungrily devouring the republic's wealth (regardless of who the locust is) reaches Moscow itself. But by that time our country's current leaders will have retired to some clean and wealthy little corner of the planet. Which is what they are counting on.

EBRD Allocates Funds for Kola Nuclear Safety Program

PM0806111294 Oslo AFTENPOSTEN in Norwegian
3 Jun 94 p 4

[Report by Ole Mathismoen: "European Financial Aid for the Kola Peninsula"]

[Text] The European Bank for Reconstruction and Development (EBRD) will give 185 million kroner to make the nuclear power station on the Kola Peninsula safe.

Yesterday the board of the bank approved a detailed investment plan for the Kola power station and two other Russian nuclear power stations. A decision in principle to give money was reached last year.

Certain negotiations with Russian authorities remain before the work can start. In return the EBRD wants the Russians to shut down some of the oldest and most dangerous reactors. On the Kola Peninsula one possibility is shutting down one of the two old reactors earlier than planned. Russian authorities have announced that they will shut it down in the year 2000.

The money will come from the special fund for making safe nuclear power stations in Eastern Europe and the Soviet Union which the G-7 countries set up in 1992 and which has since grown to sizeable proportions. Last year the Nordic area, Switzerland, the Netherlands and the EU [European Union] Commission joined the fund. The fund currently contains around 1.2 billion kroner. Norway has paid in 16.5 million.

The largest and most important of the planned investments in Polyarnyye Zori on the Kola Peninsula is an emergency cooling system. Today the power station would only be able

to stand a cooling system breakdown of an estimated six hours before the reactor core in one of the four reactors would melt.

"The danger of accidents would be reduced as a result. The employees would have much longer time for repairs," assistant director Torbjorn Norendal of the Foreign Ministry said. He is Norway's representative on the board of the bank.

Other elements in the investment plan are new and better fire equipment, instruments which are able to give operators more rapid warning that an accident is taking place, equipment for measuring radioactive emissions outside the power station itself, a number of safety valves, and other surveillance equipment. Everything will go out to international tender. The board bank will decide on the final allocation of funds at its July meeting.

Norway has already donated equipment worth 20 million kroner to the power station. It is Norendal's view that the money from the EBRD will increase the safety of the power station considerably.

It is planned that the investments will be made in the course of 1995 and 1996. The other two power stations which will receive similar help are Sosnovyy Bor near St. Petersburg and Novo-Voronezh south of Moscow.

Bellona [Norwegian environmental organization] was among the first to raise the alarm about the state of affairs at the nuclear power station only a few miles from Norway. Expert Frederic Hauge is skeptical toward the EBRD's investment plan.

"This money does not solve the biggest problem. The main threat is that the workers at the power station are not being paid. It is now a month and a half since they were paid, and last week there was a phone call with an anonymous threat that reactor four would be set on fire if wages were not paid," Hauge said.

He believes that it would have a great effect if Finland stopped importing electricity from the power station.

"I would also have liked to have seen how much progress would have been made if the 180 million had been spent on energy saving measures and the development of local gas power," he said.

A united Nordic area in the EU could mean large-scale economic and expert support for the nuclear cleanup in the north, Bettina Lorz of the EU's Environmental Directorate (DG-11) said. She has played a central role in the EEA [European Economic Area] negotiations and the negotiations on membership for the Nordic countries. Yesterday she took part at a seminar in Oslo on the EU and the environment.

She received the support of the EU's ambassador to Norway, Aneurin Rhys Hughes: "As yet the EU has not allocated money to the Kola Peninsula problems. This is something that will change radically when Norway becomes a member," he said.

Bettina Lotz told AFTENPOSTEN that there are some significant funds in the EU which are to be used for important environmental measures in Eastern Europe. Today they are being used to make safe nuclear installations, primarily nuclear power stations, in the immediate vicinity of today's EU countries.

"Even though the EU is of course already involved in what is happening in the Barents Sea region, its involvement would increase dramatically if Norway, Sweden, and Finland join. The Kola Peninsula would then become the EU's closest neighbor to the north," she said.

Official Says Murmansk Nuclear Dump for Local Waste Only

*UDOS06112394 Moscow IITAR TASS in English
14/15 GMT 8 Jun 94*

[By IITAR TASS]

[Text] Murmansk News TASS—The construction of a nuclear dumping site expected to be launched in the Murmansk region does not mean that we shall accept solid nuclear waste from all over the world, said head of the administration of the Murmansk region, Yevgeniy Komarov, in an interview to journalists.

The dumping site expected to be built with the Swedish assistance is intended only for nuclear waste from the Kola nuclear power station local ice-breakers and the Northern Naval Fleet, Komarov said.

Official Describes Komsomolets Nuclear Submarine Mission

*UDOS06112394 Moscow Radio Moscow World Service
in English 1810 GMT 7 Jun 94*

[Transcription of "Commonwealth Update" program]

[Text] The board of directors of the Russian ministry for emergency situations (Ministry for Civil Defense, Emergencies, and Natural Disasters) has held an open session to report on preparations for an expedition to the Norwegian Sea, where the Komsomolets nuclear-powered submarine sank in these waters. More from our correspondent Irina Kornikova, and here is what she writes:

I shall remind our listeners that the two torpedoes with nuclear warheads, each containing 3,200 grams of plutonium-39, were most dangerous environmentally. The torpedo launchers were partially demolished due to the submarine's deepening. There is an imminent danger of radioactive leakage into the environment due to a free water exchange to the above sections of the atomic submarine. According to some reports, this can become a reality in 1995. Therefore, a decision was taken in Moscow to carry out rescue works at the site of the Komsomolets wreckage this summer.

The director of the Main Board for Underwater Rescuing Missions, Mikhail Talokolnikov, describes the forthcoming mission as follows. [Begin Talokolnikov recording, in Russian with superimposed English translation]

Talokolnikov: To minimize radioactive leakage we have entrusted the mission with the following tasks. Firstly, the mission should try to partially seal the above sections of the submarine, using deep water submersible apparatuses. Secondly, it should monitor the radio-ecology at the wreckage site in an attempt to pinpoint most likely directions of the plutonium products' diffusion due to corrosion. Thirdly, it would examine the hub of the submarine and the floating rescue camera box, which has broken up and now lies at the bottom six km to the west of the submarine.

I shall recall that the final pressurizing of the submarine hub is due to take place in 1995. This will be a second stage in implementing the safety of the submarine. Special rubber seals were developed to block a possible radioactive leakage due to a corrosion. The first consignment is already aboard a research vessel, Academician Keldysh. These rubber seals will be mounted from the Mir manned deep submersibles, equipped with manipulators. An expert analysis shows these works will present no dangers to pilots or to the environment. Besides, the submersibles are relatively cheap. Their manufacturing costs will exceed the monitoring costs only by 15 or 20 percent and will amount to 4.6 billion rubles, \$4.1 million.

As to the ecological monitoring, a wide-ranging program is envisaged. Diverse and novel types of equipment are to be tested during the pending mission. One of the appliances will stay at the bottom of the sea to register medium radiation for one year after the mission is over. This will be done for the first time in the history of underwater works. Now a wide ecological monitoring is necessary, for real background readings at the site of the wreckage are particularly important if taken this year. If this is done experts will be able to monitor the changes in the environment pollution. [end recording]

Yablokov Sees Danger to Government in 'Worsening' Environment

*94W0312A Moscow OBSSHCHAYA GAZETA in
Russian No 23, 10-16 Jun 94 p 7*

[Interview with Aleksey Yablokov, former adviser to the Russian president on ecology, by OBSSHCHAYA GAZETA commentator Leonard Nikishin: "Ecocide—A Deadly Diagnosis"]

[Text] Quite a few noted scientists and representatives of the country's elite are among the persons who were actively involved in the reform processes at the first stage. Not all their names are heard today—there have been sharp changes in Russian politics.

Aleksey Yablokov left his position as adviser to the Russian president on ecology, although he continues to be involved in the solution of state problems related to environmental protection. OBSSHCHAYA GAZETA correspondent Leonard Nikishin has a conversation with him.

Nikishin: Aleksey Vladimirovich, you recently left your position as ecology adviser to the Russian president of your own accord. Did your relations with Yeltsin become complicated? Did it become impossible to influence the situation?

Yablokov: The president and I parted company as friends. I do not feel that I left his team. I am now heading the Interdepartmental Commission on Ecological Safety. But with regard to influence on the situation in the position of adviser to the president—it really was becoming weaker with each day. Circumstances were taking shape this way: Yeltsin did not have enough time for ecology. At first my meetings with the president took place once a month, then quarterly, then once in 6 months, and I do not even recall the last working meeting...

Nikishin: Viktor Danilov-Danilyan, the head of the Ministry of Environmental Protection and Natural Resources, admitted recently that ecological matters are not high priority for the current authorities...

Yablokov: He is unquestionably right about this. With all the political and economic squabbling, no one is paying any attention to ecological problems today. But the squabbling is not the only problem. The ecologists themselves, minister Danilov-Danilyan and I personally, are at fault, too. The government is now discussing the questions of building ports in the eastern Baltic—in Ust-Luga and Vyborg. There are no ecological studies for these projects, but after all, we must cut down 7,000 to 8,000 hectares of forest on the Karelian isthmus to build the Vyborg port, for example. Or the questions of resuming operations and building new AES's [nuclear power stations]... Did Danilov-Danilyan really stand up and say: "We are making an incorrect decision, and as a member of the government I am categorically opposed?" My voice alone was insufficient, and I was "on one side" of the government, so to speak. I wrote many reports, but they were all unanswered.

Generally speaking, the entire system of state administration is becoming inefficient. Over the past 2 years, the number of federal organizational structures more than doubled. Accordingly, the effectiveness of their work was reduced by more than half. More and more of the work is limited to just discussions. Even if there is a decision by the president. In my estimation, while roughly three-quarters of the president's decisions were carried out earlier, in 1991 and 1992, no more than 30 to 40 percent of them are carried out now. This is roughly the kind of efficiency in the government's work.

Nikishin: And is everyone slipping at the same level?

Yablokov: Mainly the middle level. The government is studying questions of executive discipline, but the problem lies not only on this plane. It is apparent that we are running into something more serious. Public officials do not need to be taught discipline. The middle level of administration is not implementing directives for some other reason.

Nikishin: Can you tell what it is?

Yablokov: I do not possess all the information to say why this is taking place. On the surface, I see one thing at present: sharp bureaucratization of state administration. I mention this with bitterness, but what I see around me is terrible. Redundant structures are emerging and responsibility is eroding.

Nikishin: But are there changes for the better in the country's overall ecological situation?

Yablokov: On the whole, the situation has worsened. It has worsened so much that it has become dangerous for the state. The word "ecocide" made its appearance not long ago, and it is very appropriate for an assessment of our situation.

The quality of public health has deteriorated sharply in many regions for ecological reasons. According to information from the World Health Organization, the influence of the environment accounts for 30 percent of the state of our health. And less than 15 percent depends on medicine. And I can tell you that last year the average life expectancy for men decreased by nearly three years, reaching only a little over 59! A boy born in 1993 does not have a chance to live until he is pensioned (and our pension age is 5 years less than in the United States).

To a significant degree, this is happening because the quality of drinking water has gotten worse, because of radiation and chemical pollution, and other ecological causes. The processes are especially rapid in areas where there are ecological problems. Some 14 to 15 percent of the country's total area is occupied by territories such as these. About 40 million people live in them.

Nikishin: There are probably no worse situations in the world...

Yablokov: No, I would not say that. I think we are in roughly the same situation that Western countries were 25 to 30 years ago. Industry was being actively developed and economic growth was being achieved at any price, but it turned out that this price was too high. Strict ecological impediments to limit economic growth proved to be necessary. And then the principle was adopted: the environmental polluter pays. Inasmuch as pollution of the environment turned out to be unprofitable, the ecological crisis was overcome. In the 1970's, policemen on the streets of Tokyo wore oxygen masks. But now the air in Tokyo is among the cleanest, in spite of the large number of motor vehicles.

Nikishin: But do we have any kind of breakthrough, any positive sign that you can cite?

Yablokov: In February the president signed an edict on protection of the environment and steady development. For the first time, we did not contrast protection of the environment with economic development, but we combined them in one concept. After all, everything is in different time frames here: the scale of political thinking extends for a period of four to five years (from election to election), the economic scale is 10 to 15 years, but the ecological time frame involves many decades. The president's edict is also an attempt to combine all this in a concept of steady development.

Nikishin: Raw material is being exported intensively at present, bringing fabulous wealth to those involved. Let us not speak about the legality of these actions now. I want to ask you how this is reflected in the ecological situation.

Yablokov: The effect is most terrible. For example, exhaustion of forestry resources today directly threatens our

national security. These are the official figures: roughly two million hectares of forest per year are being cut down and roughly the same amount are being reclaimed. But according to unofficial data, over 10 million hectares are being cut. Most of the industrial enterprises "pass over" the statistics so they do not have to pay taxes.

I had a discussion about this with Boris Nikolayevich on two occasions. Roughly as follows. I said: It is terrible that this is being done. The president answers: What are you saying? We are cutting two million hectares altogether. There is a vast amount that is not being cut—we can cut 10 times as much. Where is the problem? I say: that is not the case, first of all, because the data from aerial photography differ from the Goskomstat [State Committee for Statistics] data, the information provided to you. And secondly, the main growth of forests is in remote regions, but the cutting is in territories that are developed.

The same thing is happening with mineral resources. It was recently revealed that quotas for petroleum exports, for example, are many times higher than what is being extracted in the country. Is this an error? Were quotas issued for nonexistent oil? How could it be... The quotas are real, but the records on extraction were falsified a great deal, apparently. I have no direct proof of this, but logic and analysis leads to this conclusion.

If this practice is continued, we will be no better off than before very soon, despite all our wealth.

Nikishin: Well, how do we get out of this situation?

Yablokov: There is no structure of society anywhere in the world where half of a country's population works in industry. Industry needs 18 to 20 percent of its population for the work force, and they will produce everything needed. But most of the people in all countries are working in the services field, to make life pleasant. The distorted structure of society cannot be changed quickly—10 to 15 years are needed for this. Even then we will have 25 to 30 percent of the population employed in industry here.

Nikishin: And with all our resources, we will never reach the level of the United States...

Yablokov: But what kind of society do we want to have? Do we need a society based on the Western model? One person in America or Sweden consumes as much as 70 persons in Africa or South America. It is a society of squanderers. A vast amount of natural resources come to countries in the West from Third World countries—without them the West cannot maintain its standard of living. But Russia is self-sufficient in this regard. Our society is different in this fundamental characteristic. And we are different altogether: in what other country is 40 percent of the territory in a permafrost zone, where normal agriculture is impossible? People have begun saying now that depopulation is taking place and our population is declining... But perhaps this is

good, and we now need to ask about a sensible demographic policy. There is this concept: "the ecological capacity of a territory." There cannot be more people living in a territory than the number that can live there steadily for a long period of time.

Nikishin: And what do you see as our path to prosperity?

Yablokov: Give up the furious pace and think calmly—what kind of society we are building in Russia. Otherwise, we cannot manage without endless disruption and restructuring. But we cannot build without strict and urgent ecological measures. Otherwise we will simply die out in the process of ecocide.

Nuclear Accidents Contaminate Russian Forests

LD1606125794 Moscow INTERFAX in English
1124 GMT 16 Jun 94

[Text] Since the late 1940s, nuclear accidents have caused the radioactive contamination of 3.5 million hectares of Russian forests.

Head of the Federal Forest Service's Department for Radiological Ecology Ivan Maradudin told Interfax that the danger of fires in the radioactive forests was particularly serious.

A fire increases the concentration of radioactive nuclides of caesium, strontium and plutonium in the smoke increases by a factor of 100 and sometimes 1000. Radioactive substances rise to a high altitude and are carried to other territories.

The situation is particularly alarming in the Kaluga, Bryansk, Tula and Oryol regions, where 136,300 hectares were contaminated after the Chernobyl nuclear accident. The radiation level in these regions exceeds 5 curie per square kilometer.

The situation in the so-called Chernobyl zone has not improved over the past five years, as radioactive nuclides continue to be carried from the soil to the trees.

Maradudin said that unlike other territories and populated areas, forests cannot be decontaminated. One can only monitor the environment and the accumulation of radioactive nuclides in the forests, he said.

The Russian Forest Service received only 702 million rubles in 1994 to prevent fires in the radioactive forests. The actual sum it needs is 2.309 billion rubles. In the absence of funds, radioactive forests cannot be properly patrolled, and fire-extinguishing equipment cannot be purchased in sufficient quantity, said Maradudin.

Besides the so-called Chernobyl zone, there are other regions with radioactive forests in Russia. In the Tomsk region, about 10,000 hectares of forests were contaminated as a result of an accident at a Siberian chemicals plant in 1993.

Russian, Norwegian Scientists to View Nuclear Dump Sites

*LD1606164894 Stockholm Radio Sweden in English
1615 GMT 16 Jun 94*

[Text] Russia has agreed to let a team of Norwegian and Russian scientists investigate all its nuclear dumping sites in the Arctic Kara Sea.

This is the first time Russia has allowed western experts to examine the site, near the island of Novaya Zemlya, east of northern Norway. The joint team will measure radiation levels in the areas where nuclear waste is known to have been dumped.

Radiations Hazards in Petersburg Predate Revolution

*PM1706134194 Moscow KRASNAYA ZVEZDA in Russian
16 Jun 94 p 3*

[Article by Oleg Pochinyuk: "Treasure Hunters of Necessity: The St. Petersburg State Committee for Sanitary and Epidemiological Supervision Asks for Help"]

[Text] St. Petersburg—Treasure was discovered under the floorboards, but the treasure hunters did not experience the joy that is customary in such cases. Arriving at an old apartment on Vasilyevskiy Island, staff of the St. Petersburg center of the State Committee for Sanitary and Epidemiological Supervision immediately realized that their find was lethal—there was enriched uranium ore in the cellar.

Documents there made it clear that a laboratory had been located in the premises before the Revolution, where experiments were carried out with radioactive elements, notably radium. And radium at that time, when people were ill-informed about radiation, was like gold dust—a means of capital investment. Incidentally, one of the Soviet government's first decrees was on the nationalization of uranium mines and the confiscation of radium from establishments, enterprises, and private individuals. Members of the security service had called at the laboratory and confiscated items of value found there, but they had not looked in the cellar.

The owners of the "treasure" disappeared in the maelstrom of the Civil War, while the former private laboratory became a typical communal apartment. And years later only chance helped the lethal threat to the several families living there to be eliminated and the place to be decontaminated.

That incident occurred around two years ago, and A. Gorskiy, chief specialist for radiation hygiene at the St. Petersburg center of the State Committee for Sanitary and Epidemiological Supervision, described this episode in connection with the large-scale work being carried out in the city to seize so-called uncontrolled radiation sources. Since the memorable find on Vasilyevskiy Island the Temoyun targeted program (named for the field from where the enriched uranium at the ill-starred laboratory came) has been carried out: Public health inspectors and radiologists have surveyed more than two dozen sites in the old part of the city where, judging by historical documents, a radiation threat to people's health could have existed.

Quite a lot seems to have been done, but one problem still remains outstanding.

"We have been totally unable to make effective contact with the military," Andrey Anatolyevich said, "although we have been trying to do so for a long time, and our paths often cross." And he showed a bulky file of documents indicating when, where, and by whom radioactive sources of military provenance, as it were, were discovered. Garbage dumps figure here in the main. Army and Navy trucks are constantly being detained by State Motor Vehicle Inspection Administration staff when dumping various instruments which emit radiation.

Gorskiy also spoke about a recent incident where a military college had decided to dispose, along with its ordinary garbage, of 16 instruments whose background radiation was of the order of... 30 milliroentgens per hour.

Believe me, an impressive list of transgressions by people in uniform was produced. Who, then, is going to check them out? And how? It is well known that there are no specialists in radiation safety on the military district staff. Meanwhile there are several thousand instruments alone glowing in the dark in depots. And many of them are being written off....

Widespread Soil Pollution Across Russia Noted

*PM1706105594 Moscow IZVESTIYA in Russian
15 Jun 94 p 15*

[Report by Aleksandr Shuvalov and Yelena Shapetkina of the Russian Ministry of Protection of the Environment and Natural Resources: "Quality of Russian Soil"]

[Text] The land stock of the largest country in terms of territory—Russia—is 1,709.6 million hectares, but this in no way means that it is infinite and inexhaustible.

Not many people realize that permafrost occupies over 60 percent of the area of the country, agricultural land occupies 13 percent, and arable land only 7.7 percent; alas, you cannot say about it: "Mighty oaks from little acorns grow."

According to figures from an agrochemical investigation, 16.5 million hectares of Russian arable land have a very low content of humus, and 21 million hectares have a low content. The "nutritiousness" of the black earth in the central oblasts has almost halved in the past 100 years. In the next five years the reduction in the reserve of humus in the soil may lead to the emergence of irreversible changes in soil fertility.

The content of pesticides in the soil of Omsk Oblast is falling, but the pollution of the soil in Maritime Kray and Samara, Rostov, Irkutsk, and Moscow Oblasts remains at the previous level and the soil in latter two is in the most serious state. Regions with average pollution include the Central Chernozem area, Maritime Kray, the North Caucasus, and Kurgan Oblast. Territories with low pollution include the soils of Omsk Oblast and the Upper Volga and Volga regions, with the exception of certain oblasts.

According to data from aerospace photography, the area around industrial complexes where industrial waste is distributed covers 18 million hectares, which is one percent of

the total land of the Russian Federation. The area of soil cover polluted by heavy metals and fluorine has reached approximately 3.579 million hectares, and 0.253 million hectares are badly polluted. The most poisoned soils are in the five km zone around the city of Rudnaya Pristan, in the area of the enterprises in the cities of Svirsk and Verkhnyaya Pyshma, and in Irkutsk, Cheremkhov, and Nizhneudinsk.

It has been noted that the maximum permissible concentrations of lead in the soil have been exceeded at least 10 times over in Irkutsk, Svirsk, Rudnaya Pristan, Kamensk-Uralskiy, and Cheremkhov. For copper, the areas are Zavolzhye, Nizhniy Novgorod, Kirov, Tomsk, and Rudnaya Pristan.

The soil around enterprises in the aluminum industry has been polluted in the cities of Krasnoturinsk, Bratsk, Novokuznetsk, Volgograd, and Krasnoyarsk, and the maximum fluorine content in these areas exceeds the background level by four-10 times.

Practically all the land in Russia has been damaged. Work to protect soil against erosion has been reduced in previous years. In order to "cure" the land, 12.3 million hectares of forests have to be planted. At the current pace of work, this may take 100-110 years.

Heavy Costs for Russia if Sunken Komsomolets Sub Leaks

LD1706181194 Moscow 2X2 Television in Russian
0022 GMT 16 Jun 94

[Excerpt] [Passage omitted: background information on passing the task of dealing with the aftermath of the Komsomolets nuclear submarine tragedy from the government committee for special sub-aquatic works to the Russian Committee for Emergency Situations]

In case of the uncontrolled plutonium leak which, as experts believe, might have already started, this area of the Norwegian Sea will have to be closed off. The direct annual costs to our country are estimated at 700 billion rubles. Apart from this, Russia would have to pay Norway \$400-500 million compensation annually. The estimated polluted area of the Norwegian Sea is 1,000 km long and 400 km wide. This does not take into account the underwater currents and migration of polluted plankton. [video shows underwater shots of the submarine]

Pacific Fleet Violating Radioactive Waste Storage Rules

94WN0309A Moscow MOSKOVSKIYE NOVOSTI
in Russian No 22, 29 May 94-5 Jun 94 p B11

[Article by Yelena Matveyeva, MOSKOVSKIYE NOVOSTI staff correspondent, under the heading "Radiation": "A 'Bomb' Outside Bolshoy Kamen"]

[Text] After an international scandal erupted last fall the Russian Government banned the dumping of liquid radioactive waste in the Sea of Japan (see: MOSKOVSKIYE NOVOSTI, No. 1, 1994). However, since that time the proper conditions for the storage and utilization of hazardous waste on shore have still not been created.

Each year in the course of the operation, repair and reclamation of Pacific Fleet nuclear submarines as much as 12,000 metric tons of liquid radioactive wastes are created. These now fill all available on-shore containers, even those that are in a dangerously dilapidated condition. At any moment waste could be released, with unpredictable consequences not only for Bolshoy Kamen Bay, but for the entire Ussuri Gulf.

The Maritime Kray Administration, despite the government's ban, has repeatedly announced its intention to give permission for the next dumping of dangerous wastes in the open sea sometime in the near future. That could actually happen, because with each passing day the waste storage situation becomes more difficult. A constructive solution to this problem is also being hampered by the conflict between the mercantile interests of the central government and the regions. Maritime Kray authorities would like to have control over the millions of dollars that the governments of Japan and the United States have promised to allocate to Russia in order to solve the problem of liquid radioactive waste storage and reclamation. It seems that Moscow has also set its sights on this money, which has not yet been received.

In the opinion of local observers, the liquid radioactive waste problem hinges not so much on a lack of funding as it does on the complete unwillingness of the Pacific Fleet command to deal with radioactive waste reclamation. The Pacific Fleet currently has 47 retired nuclear submarines. Only five of them have been salvaged.

In 1989 the Pacific Fleet received a new specialized vessel called the "Pinega," with an on-board facility for processing five cubic meters of liquid radioactive wastes per hour. The vessel has been used for various purposes since that time, but never once for the purpose for which it was designed. Might not the same fate lie in store for the new facility?

The facility in question is slated for construction near the city of Bolshoy Kamen. The site was chosen on the basis of an arbitrary decision by the head of the kray administration and the Pacific Fleet command—without any serious study, and without discussion with experts or the public. The city already has more than enough hazardous manufacturing facilities.

Duma Official Scores Government's Neglect of Environmental Issues

94WN0309B Moscow NEZAVISIMAYA GAZETA
in Russian 1 Jun 94 p 6

[Article by Tamara Zlotnikova, deputy chairman of the RI State Duma Committee on Ecology: "The Government's Anti-Environmental Policy: It Threatens the Health of Russian Citizens"]

[Text] In his message to the Federal Assembly entitled "On Strengthening the Russian State," Russian President Boris Yeltsin stated: "It is essential that we be guided by the fact that environmental security is an integral part of Russia's national security. The government has developed a number of urgent environmental programs, yet their implementation is proceeded extremely slowly. Inadequate funding is

making itself felt. The Federal Assembly and the government must devote serious attention to this problem."

It would be hard to disagree with that. But then why is less than 0.6 percent of the expenditure portion of the budget, or 0.15 percent of gross domestic product, being so "generously" bestowed on environmental issues by the government that was created by this president? Such a situation has never existed in any civilized or even slightly civilized country, even though the negative and in some places disastrous state of the environmental situation dictates that environmental protection be increased by an order of magnitude at least.

I cannot understand why the government is not using the president's message as its guide.

Just prior to that time, in February 1994, Boris Yeltsin signed an edict which was very important and extremely timely for Russia: Edict No. 236, "On the Russian Federation's State Strategy for Environmental Protection and Sustainable Development." In that document the president instructed the government to approve within two months' time a plan of action for environmental protection in 1994. More than three months have passed since then. Why is the government so flagrantly and stubbornly ignoring the requirements of this edict and the president's message?

In order to back these assertions up with facts, I would like to cite just a few cases to prove the anti-environmental slant of the state budget. No funding has been provided for the following state programs: "Russia's Environmental Security," "Conversion-Ecology," "Creation of a Unified State Automated System for Monitoring of the Radiation Situation" and "Reduction in the Level of Irradiation of the Public and Industrial Personnel by Naturally-Occurring Radiation Sources (Radon)," as well as federal environmental programs pertaining to Lake Baikal, the Caucasus Mineral Waters and a number of other areas.

The system of state nature preserves is on the verge of collapse, as funding for Russia's 78 preserves is less than half of what they require. How, under those conditions, does the government intend not merely to preserve our country's unique nature preserves, but actually double their extent, as envisioned by previously adopted state programs?

One finds an even sadder picture with regard to funding of specialized marine inspections and inspections of analytical monitoring by the Ministry of Environmental Protection and Natural Resources.

The current trend toward reduction in funding for the Russian Ministry of Environmental Protection and Natural Resources leads straight to the collapse of our country's environmental protection system, a system that was created with such difficulty. The actual expenditures for it are not comparable to the losses that we are suffering as a result of this kind of "savings." Whereas direct environmental damages throughout the country totalled R15 trillion [rubles] in 1993, they are projected to rise to R43 trillion this year—a figure more than 40 times larger than the amount set aside for the environment in the budget.

The same difficult situation exists with regard to federal agencies that are responsible for meteorology, environmental monitoring and sanitary and epidemiological oversight.

It is symbolic that all of this is occurring right now, when the All-Russian Days of Defense Against the Environmental Threat are being celebrated for the first time and special government directives have been announced. I would be so bold as to say that the environmental threat to Russia's citizens begins with the anti-environmental policy of the government that came up with this budget.

On the eve of World Environmental Protection Day (3 June) allow me to quote from last year's presidential address in commemoration of this day: "The right to breathe clean air and drink clean water and state guarantees of environmental security should be included in our new Constitution. Appealing to you, esteemed citizens of Russia, on this Environmental Protection Day, I urge every one of you to make the greatest contribution you can to restoring the natural environment... throughout Russia. In this great and important cause nothing is trivial, and we will all labor together."

I am convinced that President Boris Yeltsin, as the guarantor of the Constitution (Article 42 of which states citizens' right to a positive environment), should intervene in state environmental policy and correct the government, forcing it to comply with the Constitution, the aforementioned edict, the president's message and the Treaty of Social Accord so as to amend the budget in order to solve environmental problems that are the most acute and will tolerate no delay.

I hope that the president will not permit the government to turn these important documents into empty declarations and profanation. Unless effective measures are taken today, then there will be no point whatsoever to the socioeconomic restructuring of our society. No one will be able to live in it. Already our country's negative environmental situation has caused a marked worsening in the state of health of Russia's peoples. For the first time male life expectancy has fallen below retirement age, and horribly deformed children are being born—this means that Russia's people are on the verge of irreversible changes beyond which lie the collapse of the state and the death of peoples.

Arkhangelsk Region Still Needs Help With Dioxin Pollution

PM2206131194 Moscow TRUD in Russian 21 Jun 94 p 2

[Report by Aleksandr Petrov: "Dioxin Blizzard"]

[Text] Arkhangelsk—Arkhangelsk Oblast has outperformed industrial areas in West Europe in terms of a number of indicators. There are more square kilometers per head of population here, but on every square kilometer there are more nuclear burial sites. Where else can you find a space center, a nuclear test range, and approximately 20 pensioned-off nuclear submarines for just over 1.5 million inhabitants? In terms of pulp and paper combines too, Europe cannot hold a candle to the northerners.

But a new misfortune has recently cropped up. Comprehensive research has been carried out on the oblast's territory into dioxins—the extremely dangerous chlorinated organic compound which even in insignificant quantities has a fatal impact on the immune system, causes infertility in women and leukemia in children, and aggravates the negative impact of other chemical compounds on human health.

In terms of dioxins Arkhangelsk Oblast is putting on by no means a poor performance. This contamination has even been found in Onezhskiy and Kargopolskiy Rayons, where there are no major industrial enterprises. And in Novodvinsk, where there is a large pulp and paper combine, something totally incomprehensible is happening. The level of dioxins in the air was found to be 40 times greater than the level emitted by the pulp and paper combine, and the composition of the two dioxins was completely different. It follows that there is another source. So far it is unclear what and where this source is.

The quantity of dioxins in Arkhangelsk's drinking water is currently within permitted limits. But after abundant chlorination the quantity of dioxins increases. It is no accident that a number of countries have discontinued this practice, preferring to purify their water by other means.

In addition to dioxins, plenty of other types of poison have also been discovered. Even deep underground. For example, in tests of water drawn from artesian wells in Kargopolskiy Rayon a high concentration of benzopyrene has been detected. This is a dangerous carcinogenic substance. Also, no woman who has lived here for five years has been free of complications in childbirth.

More than \$120,000 have been spent carrying out wide-ranging research. Thanks to the U.S. MacArthur Foundation, which helped the Center for Independent Environmental Programs to carry out this major task. The Ministry of the Environment and Natural Resources, the local environmental protection department, and specialists from the Center for Sanitary and Epidemiological Supervision and the "Environment of the North" Association have all played an active part in implementing the "Dioxin Pollution in Arkhangelsk Oblast" project. But from now on the oblast must rely on its own resources and means, which are slender. There are only four laboratories in Russia that have the capability to conduct extremely complex analyses to a world standard. And we need dozens....

"Dioxins are 'chemical AIDS,'" project leader Doctor of Chemical Sciences S. Yufit stated at a session of the oblast trade union federation press club. "The danger they pose to people's health cannot be underestimated...."

A program for protecting the environment and the population from dioxins is now being approved by the government. Will Arkhangelsk Oblast become one of the regions where operations will be carried out under this program? Nobody knows. Its own efforts are clearly not enough, although the oblast has now acquired a first device enabling it to carry out so-called crude analyses. But the work is unlikely to start soon—premises have not yet been prepared.

BELARUS

Scientist Views Reasons for Radioactive Pollution

WS0906135994 Minsk ZVYAZDA in Belarusian
31 May 94 p 3

[Article by Mikhail Bychkow, head of the training laboratory of the Sakharov International Higher College of Radioecology, in the "Chernobyl" supplement: "Why the Map Is Reddening"—first two paragraphs published in boldface]

[Text] Many of us, following the Chernobyl disaster, cannot suffer even hearing the word "radiation." However, we all are subject to its influence, even today. This is nothing unusual because there is a natural background of radiation—the so-called alpha, beta, and gamma radiation. This is the usual human environment.

Another thing is that the natural radiation background is being artificially increased from time to time. This phenomenon is caused by people. Of course, not by common people, but by those determining nuclear, military, and other policies. The rest of the people can only guess what those officials are "accomplishing." At any rate, such a situation existed until quite recently.

Absolutely everybody remembers, and will remember, the date of 26 April 1986, when a reactor at Chernobyl exploded. However, there are not so many who remember the date of 2 May 1986, although this date is worth remembering as well.

On this day, after the metallic uranium and plutonium melted down due to the combustion of graphite, the second Chernobyl explosion occurred. This time, the amount of caesium-137 produced was several times higher than that on 26 April. The explosion was generally cast in the stratosphere, therefore radioactive elements have subsequently been dispersed all over the world. That is why even Georgian tea contained radioactive caesium with activity amounting to one-millionth of curie per one kilogram of tea, according to our measurements at the Institute of Nuclear Engineering of the then Academy of Sciences of the Belarusian Soviet Socialist Republic.

This and many other facts were recorded in secret scientific reports which have sunk into the first department [KGB department] of the Institute, and their fate is unknown. Therefore, we should not wonder that the general public has never heard about these facts.

The overwhelming majority of our community also does not know about nuclear airbursts, when neutron weapons were tested over the Belarusian Palesse region until 1965. Our mild residents of the Palesse region pursued their life and production, while their colleagues from the military industrial complex played with nuclear "toys" in the Belarusian sky.

In general, the largest "contribution" to the increase of natural background gamma radiation was from nuclear weapons tests. The United States, China, the USSR, and other countries carried out 423 explosions of nuclear bombs in the air prior to 1980. This produced a large amount of radioactive elements, including the most long-lived—

caesium-137 and strontium-90. Such elements also include cerium-141 and 144, zirconium-95, ruthenium-103 and 106, iodine-131, caesium-134, and others. All this contributed to an increase of the exposure dose rate.

Thus, following the above-mentioned nuclear weapons tests in the Palesse sky, the exposure dose rate amounted to 120 microrentgen per hour, what corresponds to the pollution by radioactive caesium with a density of approximately 15 curie per square kilometer. The map of the gamma radiation rate was as "red" with radioactive elements as it was after the Chernobyl catastrophe. It should only be added that all the data were sent to Moscow, to a special organization headed by not unknown Academician Ilyin.

The origin of the so-called "caesium patches" with a diameter of about 30 kilometers is also interesting. They could be observed at the 21st kilometer of the Bobruysk-Kalinkovichi route, between Gomel and Vetka, near Cherykov, and in other places of Gomel and Mogilev Oblasts. What is their origin?

These were radioactive clouds "shot down" by the air force in order to prevent them from falling on West Europe (a scandal was threatening) or Moscow. Under an order from the then USSR leadership, these clouds were "shot down" on "unpromising agricultural areas" in two Belarusian oblasts. Such orders were given, in particular, by the then chairman of the State Hydrometeorological Committee of the USSR, Izrael. Your author has seen letters from this committee to some rayons, which reported such actions. You see, they "let you know beforehand."

History has not yet spoken its last word. We are going to learn more about what was done before and after Chernobyl.

ESTONIA

Denmark To Help in Hazardous Waste Management

WS1006110094 Tallinn ETA in English 0653 GMT 10 Jun 94

[From 10 Jun HOMMIKULEHT, p.3; "News Bulletin" No. 112/94]

[Text] The Danish and Estonian Environment Ministries and several companies have completed a draft project for establishing a hazardous waste management system in Estonia.

The Danish Environment Ministry offered its aid in 1991 and the work on the project was started the same year. A more detailed study took place in the period January 1993-June 1994, revealing that a number of Estonian firms fail to present adequate information on waste products situation, since they have no resources for their disposal.

The Estonian project manager Marje Uusalu said that an estimated 27.000 tons of hazardous waste is annually produced in Estonia (radioactive waste not included).

The disposal system is to be built in three stages, the first one (1995-97) including the construction of reception centres and temporary disposal sites, the second and third stages (1997-98, 1999-2000) covering the construction of a safe disposal system.

The project will cost 150 million kroons, the Danish Government and Estonian Environment Fund have promised their support.

KAZAKHSTAN

Air Pollution Turns Day Into Night for Local Drivers

LD1206100994 Almaty Kazakh Radio Network in Kazakh 0400 GMT 12 Jun 94

[Text] The dispersion of ash into the environment from 100 hectares of local landfills are forcing drivers in the Akmola region to drive with their headlights on permanently. This ash causes environmental pollution in Akmola and nearby settlements. The cost of this damage has been set at 23.000 tenge, according to the regional directorate for ecology and bio-resources.

LATVIA

Minister: Country Should Change Attitude Toward Environment

WS0906111994 Tallinn BNS in English 1748 GMT 8 Jun 94

[Text] RIGA, Jun 08, BNS - Latvia should change its attitude toward environment and state environmental policy, Environmental Protection Minister Indulis Emsis said Wednesday at the opening of a related seminar.

The government environmental policy plan is aimed at improving the quality of urban environment, promoting environmental rehabilitation in polluted areas and preserving nature resources, the ministry's press center reported. The policy should also create conditions for balanced and viable development of environment and society, the report said.

In Emsis' opinion, these objectives can be reached through integrating the environmental problems into all spheres of life and the consciousness of people.

The seminar will feature discussions on the goals of environmental policy and environmental protection priorities, as well as declare the principles of viable economy. The workshop, lasting until June 10, will also be addressed by Dutch and Swedish environmental protection experts.

UKRAINE

Environment Minister Surveys Nuclear Industry

WS1406130094 Kiev VYBIR in English 2025 GMT 13 Jun 94

[Article by Ukrainian Environmental Protection Minister Yuriy Kostenko "specially for VYBIR"]

[Text] The Ukrainian parliament's decision to lift the moratorium on nuclear power engineering development and to continue operation of the Chernobyl NPP [nuclear power plant] has given rise to a number of important questions. The main question is: Was that decision scientifically grounded from economic and ecological points of view or will it lead to the situation when, in 10 years, we will have to build several "sarcophaguses" like the one we have in Chernobyl today? To answer this question, I will try to

briefly analyze the state of affairs in our nuclear power industry and the prospects of its development in Ukraine and elsewhere. There are 14 nuclear power units in Ukraine which are located in 5 sites, involving 10 VVER-1000 reactors, 2 VVER-440 reactors and 2 notorious RBMK-1000 reactors of Chernobyl type. As far as the unit number is concerned, Ukraine occupies the 7th place in the world and the 5th in Europe. As for the nuclear capacity, equalling 12,880 MW [megawatts], Ukraine exceeds Great Britain, being inferior in Europe only to France, Germany and Russia. Despite that, our country remains part of the once single nuclear power complex and cannot exist outside it. Having become an independent country, Ukraine had a unique opportunity to set up the state of the art nuclear safety system allowing for domestic and world experience. However, unwillingness of the Ukrainian officialdom to solve this problem in a comprehensive manner, also the pressure on the part of pronuclear parliamentary lobby created the situation when today we have the same obsolete system of the bodies responsible for nuclear and radiation safety, the system that existed in the USSR. This fact, also inadequate industrial infrastructure and scientific-technological support prevent Ukraine to ensure adequate safety of its NPPs. On the other hand, almost complete dependence of this country on Russia in the NPP operation domain makes it possible for the latter to regulate the development of Ukrainian nuclear power industry in its own interests. This is very important for Russia today when there appear cardinal changes in its nuclear power complex characterized by drastic labor cuts and closure of nuclear industry enterprises as a result of reduction in financing of military nuclear programs. Given this, the Russian Government tries to reorient its nuclear industry to fulfillment of civil programs. This is proved by the latest decisions of the Russian Government on financing of construction of new NPP units. The Russian Nuclear Engineering Ministry is going to promote both Russian and Ukrainian nuclear power programs, to support the relevant decisions taken by the Ukrainian parliament involving continuation of Chernobyl NPP operation and completion of construction of 6 new VVER-1000 units. Why? Because such decisions help provide new orders for the Russian nuclear complex and said ministry. So, it is hard to answer for whom our NPPs work - Ukraine or Russia? Ukraine boasts rich deposits of uranium. We also have zirconium, hafnium, niobium, other rare-earth elements required for nuclear fuel cycle. The Ukrainian plants produce "heavy water" as well. We have a powerful scientific potential. It is worth underscoring that the fulfillment of the Ukrainian nuclear program depends on solution of the following main problems: - improvement of competitiveness of domestic nuclear industry; - raising the nuclear safety to the level excluding the possibility of grave accidents at the Ukrainian NPP; - safe handling of radioactive wastes. It is more profitable for our NPPs to use not enriched but natural uranium. For instance, fuel cycle of the Canadian reactors of CANDU type, that utilize natural uranium, is much simpler, cheaper and ecologically safer versus that of VVER or RBMK reactors which employ enriched uranium. There is no need to enrich uranium while the waste fuel in such reactors has a very small number of fissionable isotopes thus facilitating solution of the fuel

storage and burial problem. Besides, CANDU reactors can be used to burn the fuel from VVER reactors. Usually, service life of nuclear reactors is 30-40 years but, in fact, it is about 15-20 years taking into account the safety requirements. For instance, today in the world, some 80 reactors, that had worked 17-20 years, have been removed from service. The nuclear boom of the 1960's has been replaced in many countries by a "terrible hangover" in the form of closure of quite a few NPPs. This involves the growth of relevant expenses and the problem of nuclear waste utilization. According to the State nuclear power committee, removal of Chernobyl NPP from service will cost 2 billion dollars. If this is true, the idea of nuclear power engineering development in Ukraine becomes rather doubtful. In the NPPs with VVER-type reactors, steam generators should be replaced in 7-12 years. As regards the CANDU reactors, their horizontal fuel channels must be replaced in 11-12 years, not in 40 years as the reactor designers believed. The RBMK reactor requires full replacement of fuel channels after 20 years of operation. We annually spend 10-15 percent of our budget to fight against Chernobyl aftermath. One should also take into account the huge contaminated area and Chernobyl hazardous effect on human health. Chernobyl proves that there exist certain critical economic and geographic dimensions when the accident of such scale is capable of ruining the country's economy.

NPPs heat discharges twice exceed those of ordinary heat and power stations since their heat cycle efficiency is 30 percent versus 50 percent of heat and power stations. This fact and the necessity to use the closed water circulation systems require creation of big cooling water reservoirs near NPPs which change ecologic balance there. An example of this is location of the Zaporizhya NPP close to a heat and power station which enhanced the negative effect of sulfur oxide and nitrogen discharges. Situation with radioactive wastes in Ukraine is a real catastrophe. Huge amounts of such wastes were produced by Chernobyl. There are over 100 radioactive sources whose use in national economy is not controlled adequately, more than 70 million cubic meters of wastes stored in mining industry dumps. Such wastes are used as the fuel for NPPs but, at the same time, they are a powerful source of environmental contamination. Most radioactive wastes are generated by NPPs. Experts warn that absence of adequate technologies and national centers for treatment and burials of such wastes prevents to ensure proper safety of NPPs. The problem is aggravated by absence of the state strategy and infrastructure for handling the wastes. Solution of such problems is the chief prerequisite for development of domestic nuclear power industry. First of all, it is necessary to define the notion of the waste nuclear fuel. Experts from some countries (Russia, Great Britain, France, China, Japan etc.) maintain that this notion includes such valuable materials as uranium, plutonium, isotopes and rare-earth elements. Other experts (Canada, Sweden, United States) regard this fuel as radioactive wastes. It is evident that in the first case it would be unprofitable for Ukraine to give such valuable [materials] to Russia free of charge. On the other hand, at any time, Russia may refuse to accept such materials from our country. Should this happen, we must construct our own temporary

"dry" storages where the wastes may be kept from 5 to 120 years. Then we can start thinking about the ways of wastes utilization and burial. Our efforts today should be channeled to raising the NPP safety and wastes utilization. Urgent measures in this field include: replacement of Chernobyl reactors by more reliable and safe VVER-type reactors in Zaporizhya, Rivno and Khmelnytsky NPPs; construction of temporary storages for nuclear wastes; production of fuel assemblies by the Ukrainian enterprises that will help improve the NPP safety. All of us are responsible for "nuclear future" of Ukraine—either it will be bright or covered with radioactive clouds.

Two Tonnes of Water Per Hour Leaking Out of Chernobyl Plant

LD1306145294 Kiev UNIAN in Ukrainian
1300 GMT 13 Jun 94

[Text] Kiev—A UNIAN correspondent has learned that in the second unit of Chernobyl nuclear power station, approximately two tonnes of water, with a radioactivity of approximately 1.0 microcuries per liter, has been leaking out from the initial location of the containment of nuclear assemblies [yaderna kaseta], which have been spent in the reactor (the cooling pond), each hour since 7 June because of damage, which has not been found yet.

Hennadiy Masakov, head of the inspectorate of the state committee for nuclear and radiation safety at Chernobyl nuclear power station, told a UNIAN correspondent that 480 nuclear assemblies from the reactor, which was stopped in October 1991 following the fire in the turbine room, had been placed in the cooling pond. The collection of the leaked water has been organized at the unit. In addition to the basic scheme of the water supply in the cooling pond, another three reserve ones have been prepared.

The nuclear assemblies are not threatened with being without water.

According to an elaborated program, the search for the location of the water leak is being carried out.

It has been reported at Ukraine's state committee for the use of nuclear power that such incidents have occurred before,

but on 7 June it became more noticeable. The level of radioactivity has not changed and remains lower than normative restrictions.

The document on this event, which Viktor Vasylychenko, chief engineer at Chernobyl nuclear power station, signed, contains this conclusion: "There is no uncontrolled emergence of radioactive substances in accordance with restrictions established by conditions of normal operation, no increase in the dose of the irradiation of personnel, nor additional contamination of the environment due to the leakage of water from the cooling pond."

EC Radiation Monitoring Project Approved

LD2106165294 Kiev UNIAN in Ukrainian
1930 GMT 20 Jun 94

[Text] Kiev—UNIAN learned today that Ukraine's Ministry of the Environment has agreed technical requirements for a system of radiation monitoring in Ukraine. The requirements were worked out by the British company PA Consulting Group, in accordance with the EEC program of technical assistance to the CIS (TACIS). They were agreed following expert appraisal by Ukrainian departments involved in radiation monitoring and accident control.

Kostyantyn Rudya, deputy head of the directorate for nuclear and radioactive safety of Ukraine's Ministry of Environment [name and title as received], told UNIAN that the agreement makes it possible to launch the first part of the Gamma-1 monitoring system for nuclear power plants, which constitutes the first part of a radiation unit in Ukraine's environmental monitoring system which is being developed in coordination with the Ministry of Environment. According to Kostyantyn Rudya, the EEC wishes to receive immediate reports on radioactive accidents at Ukrainian AES [nuclear electric power station] which could have transboundary effects.

Ukraine's Ministry of Environment, taking national interests into account, has attached additional conditions to the technical requirements submitted to the EEC mission in Ukraine. These include the widest possible use of Ukrainian equipment, services, and organizations by the Gamma-1 contractor. Ukraine's Ministry of Environment has also expressed an interest in Ukraine's participation in approving criteria for the choice of contractor in a competition to be held by the EEC.

REGIONAL AFFAIRS

Belgium Blocks EU Packaging Directive

BR0906132194 Groot-Bijgaarden DE STANDAARD
in Dutch 9 Jun 94 p 1

[Article by Antoon Wouters: "Belgium Thwarting European Packaging Directive Today"]

[Excerpts] Belgium does not agree with the amendment by the European Parliament (EP) to the European Directive for packaging and packaging waste, and will oppose the directive. This was announced by Federal Environment Minister Jacques Santkin in Luxemburg yesterday [8 June]. The issue will be discussed at the European Environment Council today [9 June]. Germany, the Netherlands, and Denmark are also rejecting the directive. Santkin took the decision at the request of Flemish Environment Minister Norbert De Batselier, and after a verbal dispute at the interministerial foreign policy conference.

According to Santkin, the changes made by the EP to the directive, disturb the balance which was reached at the end of 1993 between environmental protection and the safeguarding of the internal market. This compromise was reached thanks to the European Union's Belgian presidency. As a result of the directive's blocking, the Commission and the Environment Ministers will have to find a new compromise with the EP. [passage omitted]

De Batselier and Santkin fear that the amendment could jeopardize the Belgian ecological tax on disposable packagings. [passage omitted]

FRANCE

Mitterrand, Balladur Address Environmental Conference

BR1406134394 Paris LIBERATION in French
14 Jun 94 p 37

[Helene Crie report: "France, Rio's Good Student"]

[Text] "The fruits have not fulfilled the promise of the flowers, the pledges made in Rio have mainly remained a dead letter." The Senegalese environmental protection minister was yesterday the guest of Michel Barnier, his [French] counterpart and organizer of the National Environmental Conference which was intended to assess the results of the UN Earth Summit in Brazil in 1992. The African guest was frank: The pledges made in Rio presupposed a colossal international financial effort to help the developing countries to reconcile economic growth and respect for the environment. Two years later, the money is still not there. At least not in large enough quantities to really influence the Third World's economic choices.

Francois Mitterrand and Edouard Balladur came to express their satisfaction at seeing France hold its place with honor. "France, which played an important role in the Rio conclusions, must set the example by respecting its pledges," the president of the Republic said, listing some of the promises kept: translation into national law of the international conventions on biodiversity and on climatic change; an

increase in the share of GDP devoted to development aid in 1993; and a considerable contribution to the World Environment Fund. But "nature's pace is not the one imposed by international competition," Francois Mitterrand said with regret, philosophizing on the concept of sustainable development.

The prime minister was more pragmatic: France is shouldering its share of sustainable development by "taking steps" to improve its railroad transportation, for instance, and setting up "an electricity production which emits very little carbon dioxide into the atmosphere" (thanks to nuclear power, which was carefully not mentioned—LIBERATION editor's note). And, by proposing to Parliament a new plan for regional development, which guarantees "sustainably habitable cities and permanently inhabited rural areas."

This makes France Rio's good student. And Europe should also be a good student, according to Francois Mitterrand, who reaffirmed that "Article 2 of the Maastricht Treaty promises a lasting growth which respects the environment." And he treacherously stressed that this argument "was not heard once during the recent European election campaign."

GERMANY

Toepfer on UN Post, Rio Environmental Partnership

94EN0386A Hamburg DIE ZEIT in German
27 May 94 p 33

[Interview with Federal Environment Minister Klaus Toepfer by Fritz Vorholz and Christian Wernicke; place and date not given: "I Want To Try It at Least"]

[Text]

DIE ZEIT: Minister, are you going to resign in the next few days?

Toepfer: Why would I? Certainly not.

DIE ZEIT: You just took on an important post with the United Nations: you were just elected chairman of the Commission on Sustained Development [CSD]. Can this mammoth task be done on the side from Bonn, as it were?

Toepfer: That is an honorific title. And I can quite readily combine it with the job of environmental minister of the Federal Republic of Germany. But, of course, it requires lots of concentration, coordination, and a good staff.

DIE ZEIT: Environmental and developmental groups from many countries take quite a different view. They fear that the commission's work could trickle away through the sands, if you do not meet the new challenge with all your energies.

Toepfer: There is, clearly, the danger that the results of Rio could be lost. On all sides, there is the concern that the Commission on Sustained Development is not in a position to advance the principles and the cause of Rio. Many, especially in the developing countries, are convinced that the CSD has accomplished too little in its first year.

DIE ZEIT: The chairman of the UN General Assembly even thinks that the decisions of Rio, and the partnership that was concluded there between North and South, have long since been forgotten.

Toepfer: For precisely that reason, there would have been many good reasons for saying: Even I cannot change it. But would that be the proper conclusion? Either the matter is left to trickle through the sands, or an attempt is made, wholeheartedly, with all the risks that that entails, and small chance of spectacular successes. But at least I want to, I must, try to change this trend toward resignation.

DIE ZEIT: That sounds very optimistic. What do you intend to do?

Toepfer: The Rio process, that is to say, the partnership that has been forged between north and south, must be advanced honestly and substantially. At the present time, we are holding one conference after the other. In September, the World Population Conference is slated for Cairo, then there is the World Social Summit in Copenhagen, then the Women's Summit in Beijing, and so on—all events with a clear reference to sustained development. But it must not come to pass that we rush from one summit to the next, only to determine, in the final analysis, that we are marching without a compass, without any internal guidelines, without a common goal. Up to now, the brackets between the conferences have been missing.

DIE ZEIT: How do things stand with the often-cited global partnership between north and south?

Toepfer: For the developing countries, to an ever greater degree, the tough consequences of the conflict between East and West that has been overcome, are becoming apparent. In former times, the north helped—in the East as well as the West, and they did so, in part for strategic considerations; playing the competing systems, one against the other, brought them developmental opportunities, and material assistance. That is missing now, and the poorest of the poor are suffering because of it. Then, too, the long, deep recession in the industrialized countries has been a factor, as has the economic break-up of Central and East Europe.

DIE ZEIT: So, you want to procure more money for the poor countries?

Toepfer: That plays quite a central role in the case of the developing countries, of course. We must see what will become of the "new and additional funds" that were decided upon in Rio. There are positive signals, but it is also clear that because of the economic problems in the donor countries, the monies are not being made as readily available as the developing countries correctly thought they would be in Rio. But it is not just a matter of money; there is also the matter of transferring technology, administrative assistance, and opening up the markets.

DIE ZEIT: Little is coming, even from Germany. In Rio, the chancellor promised 780 million German marks [DM]. When it came time to pay, not even DM400 million was left.

Toepfer: It is correct that we, too, have to come to terms with the economic break-up, but by no means have we sent

out the signal that we are getting out of the global partnership, which is based on solidarity.

For the future, the question whether we develop and conclude innovative financial instruments will be an important one. The developing countries are calling for international taxes, a supplement on airfares, for example, which would then be funnelled to them. Matters of this type will occupy us at the CSD.

DIE ZEIT: What would be more significant than small gifts are open markets.

Toepfer: That is how things stand right now. To be sure, due to low raw material prices, the developing countries, in particular, are suffering from the weakness of the world economy. In Rio, we missed the opportunity to talk about trade issues. Now, it is quite important not to disappoint anyone. The positive conclusion of the GATT negotiations provides a very good basis for this.

DIE ZEIT: And yet, Europe unabashedly limits the importation of bananas from Latin America.

Toepfer: That was and is, truly, a signal in the wrong direction. And we must not arouse the suspicion that, under the cloak of environmental policies, we want to establish new trade barriers. Some politicians from the Third World are already fearful that even eco-labels, like our blue environmental angel, are signs of a green imperialism, as my Indian colleague, Kamal Nath, has said. Environment and trade, therefore, are issues that will keep us intensely busy. They are a very hot topic...

DIE ZEIT: ...about which the World Trade Organization will be occupied as well.

Toepfer: But we cannot simply leave it to trade policy. For example, in the UN Commission for Sustained Development, we shall soon be dealing with matters of forest policy. In Rio itself, the best we could do was agree on a few nonbinding principles. Now the matter is beginning to pick up some momentum. Think of Greenpeace's action against Canadian wood. Something like that is effective. And so the question is raised: What is sustained forest use? And, we must allow the question to be put to us why we do we want to dictate to other countries what they may do and what they may not. It is just the same with social policy. We want neither social nor environmental dumping—others want no hindrances to trade outside the constraints of the rates insofar as environmental or social standards are concerned. We must take care that our efforts on behalf of environmental policy are not misunderstood as a barrier to our own benefit.

DIE ZEIT: But how is that done?

Toepfer: I can give you an example: a German cement producer recently told me that at present, the cement from our Eastern neighbors is delivered at prices that are lower than the cost of the wages he must pay in Germany alone. One reason for this is the lack of environmental surcharges in Eastern Europe. His proposal was: let us collect an import duty that does not disappear into our coffers, with the help of which the eastern cement plants can be retrofitted.

Considering something of this sort is urgently needed at the CSD. In Rio we decided that trade, the environment, and sustained development must be mutually supportive.

DIE ZEIT: Can you actually imagine such a form of partnership?

Toepfer: Certainly. By decreasing emissions of carbon dioxide, which are harmful to the climate, we want to do precisely that: the industrial countries promise to stabilize their emissions, or better yet, to reduce them by a certain amount, as we decided, in Germany's case, to reduce them by 25 to 30 percent. For what the industrial countries do together with the developing countries beyond that to curb carbon dioxide, they must, to some degree, be given credit.

DIE ZEIT: Let us remain with the threat to the world's climate. The International Energy Agency predicts that the wealthy OECD countries, by the year 2010, will spew out approximately 30 percent more of the greenhouse gas carbon dioxide. That is in diametrical opposition to what was decided at Rio.

Toepfer: That stands in particular opposition to the Rio climate convention, which is binding from the standpoint of international law, and which, in the meantime, 68 countries have ratified.

DIE ZEIT: Evidently, that is not worth much.

Toepfer: From the standpoint of international law, it is binding! But it is all the more important that now all the industrialized countries must get to work: for example, that we in the European Union [EU] not only decide to stabilize carbon dioxide emissions, but that we also provide the instruments for doing so.

DIE ZEIT: The carbon dioxide/energy tax.

Toepfer: That is a must...

DIE ZEIT: ...concerning which Brussels fights continually.

Toepfer: There are precisely five reasons for that. The southern Europeans say that the northern Europeans—that means we Germans, too—with their high per capita carbon dioxide emissions, should reduce these emissions and bear the cost associated with doing so. Others say: if a tax at all, please, only a carbon dioxide tax—whereas the critics see in that an instrument for the promotion of nuclear energy. The third point is the so-called conditionality: the EU should become active only if the OECD countries—Japan and the United States in particular, do something. The fourth group argues: with a tax of \$3 per barrel of oil, there will be no reaction at all insofar as demand is concerned, and for that reason, it should be left alone. And finally, the argument that the introduction of new taxes is a matter that should be left to the member countries. Things get hung up at that point in all these moves.

DIE ZEIT: ...because, to put it quite simply, the political will to do anything is lacking.

Toepfer: That, among other things, certainly plays a decisive role. And that is why I agree with my French colleague: what is not done in this area in the next 12 months in the

EU—Germany, then France, will hold the EU presidency—probably will not be done so quickly.

DIE ZEIT: Mr. Toepfer, we have the impression that your election to the chairmanship of the CSD was a belated thank you for your involvement at the Rio conference. Your colleagues in Bonn seem to be less grateful.

Toepfer: How do you arrive at that conclusion?

DIE ZEIT: Think of your struggle against the superstition that environmental protection costs jobs.

Toepfer: It is sometimes enervating. That is true.

DIE ZEIT: Think of your promise to fight the climatic catastrophe. In the old laender, carbon dioxide emissions have even increased slightly since 1987.

Toepfer: They increased from 715 to 716 million tons, which is to say they have remained virtually constant. At the same time, however, the population in the old laender has grown by circa seven percent. That means that in terms of per capita emission of carbon dioxide, we have had a definite decrease.

DIE ZEIT: So you still believe you can keep your promise to decrease carbon dioxide emissions by 2005 by 25 percent with reference to 1987 levels?

Toepfer: If we can manage to control the growth process in the new laender with the emissions level that has been achieved at present—incidentally, this level is, per capita, still above that of the old laender, then we shall have 15 percent less carbon dioxide than in 1987, the base year for our reduction obligation.

DIE ZEIT: Ten percent is still lacking.

Toepfer: By way of a variety of important measures, these can still be reached: by way of the thermal utilization regulation, by way of traffic-related measures, all the way to the thermal protection regulation...

DIE ZEIT: ...which a leading producer of building materials has already characterized as "outmoded" before it was even passed.

Toepfer: I tend to be rather grateful for such criticism. It proves that legislative regulations are still being undercut, but we also need the European carbon dioxide/energy tax. And we need a European provision for limiting carbon dioxide emissions from cars with the average of at most five liters per 100 kilometers. I agree with my French colleague that we shall tackle the problem together if the commission does not soon present a draft.

DIE ZEIT: Mr. Toepfer, why would you not rather tackle your task in New York wholeheartedly, and rid yourself of the albatross that is hanging around your neck here?

Toepfer: The new job, naturally, has much to do with the fact that I perform a function in Bonn on the national level, that we are held in esteem in terms of environmental policy worldwide.

DIE ZEIT: And your frustration threshold has not yet been crossed?

Loepler: No. Quite the contrary. Even if one stands in the midst of criticism in such a fascinating time of historical changes that does not mean that one has not moved anything or that one has advanced nothing. And, in New York, I shall have to face the question again and again how I do my homework. That is the most important basis, even for credibility on a worldwide scale.

Market To Decide Between Waste Recycling, Incineration

94WN0278B Duesseldorf VDI NACHRICHTEN
in German No 17, 29 Apr 94 p 2

[Article by Monika Schaake: "With Market Economy Against Waste Mountains"]

[Text] Bonn—Anyone who is involved with waste will have to relearn it: In the future, the key concept will be called "recycling" and include both recyclable "secondary raw materials" and "waste." On 15 April the Bundestag, with the vote of the coalition, approved the draft for the new "Waste and Recycling Management Law." The essence of the law is: In the future, manufacturers are obligated to produce their own products in their own plants or to dispose of them. Previously, it was a matter of "The economy produces and the state takes care of disposal," explains Kay Friemuth, spokesman for the Federal Environment Ministry.

The draft bill, which Federal Environment Minister Klaus Toepler had presented as early as June 1992, drew criticism from nearly every side and had been reworked by the Environment Committee in the Bundestag. The version now approved differs on significant points from the first draft. Thus, recycling no longer has precedence over incineration. Waste for incineration must have an energy content of at least 11,000 kilojoule per kilogram, and, further, the energy must be utilized as power or heat. More importantly, the incineration is required to have an efficiency of at least 75 percent. By comparing net ecological results experts are to report the most environmentally friendly type of use in each case. In addition, the law prescribes that only major companies must submit waste management reports for all goods produced. Small and medium-sized companies must prove suitable disposal to the authorities.

Further, voluntary acceptance of goods returned for disposal must be regulated. For example, legal ordinances are provided for the return of old cars and scrap electronics. According to the draft system for packaging, manufacturers are to arrange with the private economy for the return of products that must be recycled.

In a joint declaration Steffen Kampeter (Christian Democratic Union), Gerhard Friedrich (Christian Social Union) and Liberal Party Bundestag delegate Birgit Homburger praised the new waste and recycling management law, particularly for use of its "market-economic incentives for more environmentally sound production." They also greeted the "non-ideological target hierarchy," through which the scheme that "avoids recycling instead of disposal" is being broken up.

Gabriele Klinge, environmental expert for the Central Association of German Manufacturing in Bonn, also appears to be satisfied. "The new draft law is closely oriented at the economy and at practical application." Small and medium-sized enterprises, in particular, can now implement disposal regulations in a "proper ratio." Rainer Cosson of the Federal Association of the German Disposal Industry (BDE) regards the new law as opportunities for the industry. "The private disposal economy is moving further ahead."

In the opinion of the opposition and the environmental protection organizations, the law has been weakened at the wrong points. SPD Bundestag delegate Liesel Hartenstein deplors that the influence of the economy resulted in just a watered-down law. "The priority of avoiding waste was left by the wayside," they declared last week in Bonn. The law does not take effect until the time when the waste has already been produced. "In the future all the waste that does not end up at the dump will be regarded as already having been avoided," criticizes Wolfgang Helm, scientific associate of the group Alliance 90/Greens.

The new law has not yet passed all the parliamentary hurdles. The opposition assumes that in the vote on 20 May it will not get a majority in the SPD-dominated Federal Council. Only on one point does everyone agree: It is urgent. Because the new law is the reply to a European guideline on waste which must be translated into German law. And there are precisely seven days until the deadline imposed by the EU [European Union].

Baking Soda Used To Scrub Stack Gases

94WN0278A Duesseldorf VDI NACHRICHTEN
in German No 17, 29 Apr 94 p 23

[Article by Ute Schmidt: "Baking Soda Cleans Waste Gases"]

[Text] Duesseldorf—When heated, baking soda releases carbon dioxide (CO_2) and water, and it is also a compound that reacts easily and neutralizes acid substances. Scientists from the chemical company Solvay used these principles in developing a new method for scrubbing stack gases.

Stack gases are one of the principal problems of incinerating garbage. When leaving the heating vessel they contain solid components (fly ash), heavy metals such as lead, mercury, cadmium and acid compounds such as hydrochloric acid (HCl), sulfur dioxide (SO_2) and nitrogen oxides (NO_x). In order to purify the acid waste gases, conventional methods usually employ lime or milk of lime. The chemical enterprise Solvay has presented a new dry method: The starting substance is "baking soda" (bicarbonate of soda). The first test run in a German waste incinerator in Wuerzburg has just been completed.

The principle of the method is: The alkaline bicarbonate of soda is first sprayed as a powder directly into the stack gases. It reacts with hydrochloric acid to become sodium chloride (table salt), and with sulfur dioxide to become sodium sulfate. Bicarbonate is very reactive at the usual stack gas temperatures of 160 to 250°C. In order to reinforce this even more, the powder is finely ground before being sprayed in. "Our experience shows that we have no problem staying

within the German emission limits with respect to acid gases," reports Dr. Hans-Juergen Korte, head of application technology at Solvay Alkali GmbH, Solingen. According to measurements taken up to now, 99 percent of the hydrochloric acid and 95 percent of the sulfur dioxide are converted. There is one limitation, however: "Unfortunately, we are not or only partially able to catch nitrogen oxides," Korte admits. But he remains optimistic: "We are looking for a way for nitrogen oxides as well." Tests have also been carried out in Wuerzburg as to how well dioxins and heavy metals can be removed from the stack gas. The means of choice is here activated charcoal, which can also be used with conventional methods. Says Korte: "The first figures are promising."

The advantage with the Bicar system is that the converted gases are obtained as solid salt residues. There are no waste waters such as are common with wet procedures. In order further to purify the residual salts the chemists have developed a second method. This involves eliminating the organic impurities with activated charcoal, and special ion exchangers separate out the heavy metals. What remains in the end are the pure salts, and they are to be recycled in the chemical industry as raw materials.

The inventors of Bicar envision the "customer package" as follows: "We deliver the bicarbonate to the plant operators and get back the purified salts." This applies only to table salt, however. The sodium sulfate which forms during the desulfurization must be removed by the plant operators themselves. "We have no use for that," Korte explains. "but the table salt we can process into soda in our plants." So far, however, nothing can be recycled yet because "the entire system has not been initiated here."

The waste that needs to be disposed of is to be considerably reduced through the salt reprocessing. Accordingly, the dumping costs will drop. The amount of sodium bicarbonate is also small. Korte calculates: For 1 ton of incinerated household waste as a rule 25 to 30 kilograms of sodium bicarbonate is needed. After the purification process about 20 kg of mixed salt remains. If this is subsequently recycled, the residues that need to be dumped are reduced to 2 kilograms. This corresponds with 20 to 30 times less than for comparable technologies.

Whether the method will pay for itself in real money is something no one can predict. It is at least no more expensive than comparable processes, Korte determines. The increasing dumping costs would in any event benefit Bicar.

Dramatic Increase Recorded for Wind Energy

BR1506124494 Berlin TAZ Database in German 27 May 94

[Unattributed article: "Wind Energy—70 Percent Increase"]

[Text] Hamm - Wind energy is currently achieving growth rates of up to 70 percent in Germany. There are over 1,800 wind power plants in existence, stated Carstensen, the chairman of the Federation of Renewable Energies, yesterday at the opening of Renergie '94, the first nationwide trade fair for environmentally friendly energy technologies.

He added that 600 plants had been installed in 1993 alone. Germany is number one in the development and sale of wind power plants, Carstensen said, but to get renewable energies accepted would require a change in the structure of the energy industry.

Toepfer Outlines Environmental Goals for EU Presidency

AU206093294 Berlin NEUE ZEIT in German
20 Jun 94 p 4

[Interview with FRG Environment Minister Klaus Toepfer by Susanne Krispin; place and date not given: "In Small Steps Toward the Five-Liter Car"]

[Text] [Krispin] What is your main goal in environment policy for Germany's presidency of the European Union [EU], which will begin in July?

Toepfer: We understand the German EU presidency as a comprehensive task. At the same time, I have taken over, on behalf of the FRG, the chairmanship of the UN Committee for Lasting Development. In March 1995, we will hold a conference in Berlin of the states that have signed the convention on climate protection. And it is a matter of course that we are acting in the European Union and in Germany toward the goal of achieving a lasting development. This includes the energy problem, because 70 to 80 percent of the environmental problems are linked with energy consumption. Therefore, we will adopt this as a central goal of environmental policy.

Krispin: Are there already specific concepts for the Berlin climate conference?

Toepfer: We have a climate convention, which is binding under international law. In addition, the European Union has committed itself to achieving a stabilization of carbon-dioxide emissions at the level of 1990 by the year 2000. In particular during Germany's EU presidency, we will have to work on that, because some states, such as Spain, will still increase their carbon-dioxide emissions. Only if several states reduce their emissions will we be able to stabilize the values in Europe. Germany has to prove that we are able to clearly reduce the emission of carbon dioxide, which we have already been doing so far.

Krispin: A total of 15 percent of the reduction is due to the closing down of industry in the east. In the west the absolute value is stable, which means a negligible reduction of the per-capita value given the increase of the population in the old laender. However, Germany wants to save 30 percent. Where are the other 15 percent supposed to come from?

Toepfer: We will reduce the use of brown coal for electricity production, because brown coal is the most difficult energy source regarding carbon dioxide. We will manage this with new coal-fired power plants with a high efficiency, such as in Jaenschwalde or at Schwarze Pumpe. This means a considerable challenge regarding jobs, which we confront by means of improvement measures in brown coal strip mining. In the west we must act in the field of energy supply to our households and in industry. For this purpose, we must correspondingly amend the decree on the use of heat. This

means, above all, for the old laender that waste heat is to be used more efficiently, for instance via power-heat coupling. In the new laender, existing long-distance heating plant are to be preserved, but are to be restructured for power-heat coupling.

Krispin: Where can we save most?

Toefer: The greatest potential for reduction lies in the field of private households, followed by energy supply and industry. Smaller but still important potentials can be found in small businesses and in the use of renewable energies. Regarding the increases in traffic, it is necessary to stabilize the carbon-dioxide values.

Krispin: How do you want to do that?

Toefer: During the time of our EU presidency, we want to pass a decree, according to which the average consumption of newly registered cars must gradually approach five liters [consumption per 100 km] by the year 2005, because the cars which are registered nowadays will still drive for another 10 years. Their consumption is about seven liters. The average consumption of the overall number of cars is considerably higher. Already at the beginning of 1993 the European Union should have presented such a decree. Unfortunately, it did not do that. Now we will urge a change. The other approach is a carbon-dioxide energy tax. Over the past three-and-a-half years it has only been discussed in the European Union, but has not been adopted, because there is considerably resistance against it in the European Union. We will try to make our legal and tax concept in the European Union quite clear to bring about a decision. Furthermore, the FRG must make it clear that it has found a realistic approach to achieving its self-imposed goal of a 30-percent carbon dioxide reduction.

Krispin: The German Institute of Economic Research (DIW) has now stated in a study that the FRG could introduce an energy tax on its own without suffering any economic disadvantages.

Toefer: I believe that the arguments in this study are very one dimensional.

Krispin: Why?

Toefer: Because the structural effects are not sufficiently taken into account. The DIW report is correct in stating that changes in the tax burden are also linked with dynamic technical developments, which are considered to be an advantage for Germany as a business location. However, we should do everything to get a general consent in the European Union regarding the tax developments.

Krispin: According to the study, energy-intensive industries, such as the chemical and steel industries, would pay higher taxes and the service sector would pay lower taxes.

Toefer: But the question is how we can achieve the goal of full employment simultaneously with foreign trade stability and environmentally compatible growth. I do not believe that we can suddenly change from a structure that is also characterized by industry to a structure that is solely oriented toward services. We agree with our French colleagues that in those places where we make exports we should take

fewer national measures. In those places where we have regional markets, such as in many services, we can act on our own more easily. However, German chemical industry, for instance, must stand on its own in international competition.

Krispin: What about the structural change?

Toefer: Of course, we must support structural change in the spirit of an ecological-social market economy. However, what should be the speed of implementation and how can ecological changes be made without entailing social imbalances? We are in a situation of upheaval and we have to implement the transformation of a planned economy into a market economy system. We are making progress with that. The economic growth rates in the new laender prove that.

IRELAND

Watchdog Agency Warns of Fines for Polluters

94WN0321 Dublin IRISH INDEPENDENT in English
5 May 94 p 6

[Article by Tony O'Brien: "Agency Warns Polluters of £10m Fine Risk"]

[Text] Polluters who fall foul of the new Environmental Protection Agency (EPA) could face fines as high as £10m and 10 years imprisonment, the new watchdog warned yesterday.

From this month, the EPA will be responsible for licencing a range of new operations in the mining, energy, chemical, food, textiles, cement and waste industries and, at a later stage, major pharmaceutical companies and hazardous waste incinerators.

EPA director Iain Maclean said the agency intended that the licencing system "would be fully enforced." Where clear breaches of the licence occurred, there would be prosecutions.

Under the law, failure to comply with any condition of a licence is an offence and a person found guilty may be liable on summary conviction to a fine of up to £1,000 or up to 12 months imprisonment.

However, on conviction on indictment, an offender would be liable to a fine of up to £10m or to imprisonment for up to 10 years. At the discretion of the court, a person found guilty could face a fine and jail term.

EPA director general Liam McCumiskey acknowledged that to attract such a penalty, the offence involved would have to be very serious such as a major oil spill or accident at a chemical plant or power station.

Environment group Greenpeace expressed concern at the new licencing procedure, calling it an "outdated system of controlling rather than eliminating pollution."

In introducing the new system, the Irish people had effectively been "sentenced ... to more of the same."

NORWAY

Norway's Increased Whaling Quota Condemned by UK

PM0806120494 London THE DAILY TELEGRAPH
in English 8 Jun 94 p 13

[Article by Charles Clover: "Fury Over Norway's Whaling Defiance"]

[Text] Britain yesterday condemned Norway's decision to kill 301 minke whales this year in defiance of a worldwide whaling moratorium.

Norway has given its whalers a quota of 29 more whales than last year despite International Whaling Commission [IWC] advice that stocks could tolerate a quota of only one whale, even if the moratorium was overturned.

The decision, 10 days after the International Whaling Commission meeting in Mexico, is likely to bring international condemnation and may bring sanctions from the United States.

Under the quota set by Norway's Labour government, 189 whales will be killed by the commercial fleet and 112 for research.

Last year Norway declared its first commercial whaling quota for six years in defiance of the 1986 moratorium and had hoped to get the moratorium overturned.

A spokesman for the Ministry of Agriculture said last night "The Government deplures Norway's decision to whale for a further year particularly in view of the uncertainty there currently is about the number of minke whales in the North Atlantic."

At the Mexico meeting the scientific committee of the IWC took issue with Norway's assertion that there were 86,000 minke whales in the North East Atlantic. The scientific committee said there were only 50,000.

Greenpeace said that it was appealing to companies to step up boycotts of Norwegian fish.

Last year Safeway and Iceland stores imposed boycotts of Norwegian products.

UNITED KINGDOM

Pollution Inquiry Calls for Controls on Ships

94WN07984 London THE DAILY TELEGRAPH
in English 18 May 94 p 4

[Article by Charles Clover, environment editor: "Pollution Inquiry Calls for Severe Controls on Ships"]

[Text] Severe sanctions against the thousands of unsafe, rusting, under-maintained ships which annually threaten to

cause disastrous spillages of oil or toxic waste in British waters were called for by the Donaldson inquiry yesterday.

The inquiry, set up after the Braer oil spillage in Shetland to look at ways of preventing pollution, concluded that there was "a pressing need" to clamp down on the growing problem of unsafe shipping at home, internationally and in the EC.

Lord Donaldson, a former Master of the Rolls, said he and his two assessors were astonished by the extent of the disrepair of the world's merchant fleet and the threat this posed to Britain which was "on the central reservation" of congested marine motorways.

The inquiry found that 60 per cent of ships inspected failed to comply with international standards.

"If instead of ships the inspections had been of aircraft, there would have been a public outcry," said their report.

Lord Donaldson's panel was also "surprised and alarmed" to find that 32 serious or potentially serious accidents took place in British waters once a fortnight during the course of the 61-week inquiry.

Their 522-page report, called for annual MOT inspections for all shipping, for a network of salvage tugs to provide assistance in emergencies, and for the setting up of a limited number of marine environmental high-risk areas. Mr John MacGregor, the Transport Secretary, "welcomed and accepted the thrust of the recommendations" but warned that many of its solutions could only be achieved with international agreement.

Among the most far-reaching of Lord Donaldson's 103 recommendations is a system of progressive sanctions against the owners of rusty, unseaworthy and ill-equipped vessels.

This system of controls, imposed by the port state as opposed to the "flag state" which is responsible for the ship under present international law, would apply the new principle of "making the polluter and the potential polluter pay."

Under this system, ships which had failed previous inspections would have to give 48 hours' notice of arrival at British and European ports. Failure to give advance notice would result in obligatory delays to loading or unloading cargo or even a ban on unloading.

The requirement to notify in advance would remain until the ships concerned were in a satisfactory condition. Further pressure on bad shipowners and managers, said the inquiry, could be extended to all the ships they operate.

The report said the shipping industry was global and fiercely competitive. "This produces low or negative profit margins and a strong temptation to cut corners, resisted to their credit by some, but far too few, shipowners. In one way or another we have to make it unprofitable to cut corners."

British Industry Works Toward Voluntary Environmental Protection

94WS0364C Frankfurt/Main FRANKFURTER ZEITUNG/BLICK DURCH DIE WIRTSCHAFT in German 19 May 94 p 8

[Article by Arno Noeldechen: "Experts Say Demands of Rio Environmental Conference Technically Workable"]

[Text] Frankfurt. Scientists, politicians and representatives from British industry discussed at a technical meeting this spring in London the options already available today for effectively countering the continuing increase of carbon dioxide in the earth's atmosphere. The experts agreed that one country alone cannot solve this problem [which affects] the entire earth.

Almost unnoticed by the German public, England is actively involved in environmental protection. The country orients itself very closely around the guidelines of the Rio de Janeiro Agenda 21. Government and industry have recognized that there is also money to be made in environmental protection, whether with ecologically compatible, economically manufactured products or with the application of the science of management to gain control over environmental problems [facing] Britain and Europe.

In England, federal institutions and authorities perform more of a monitoring and advisory function, while industry itself—without comparably strict laws or regulations as in Germany—takes action on its own initiative.

As Sir John Mason from the Manchester Institute of Science and Technology explained at the meeting, the signs are increasing that the feared severe climatic changes brought about by the constant increase in atmospheric carbon dioxide will not lead to such rapid changes in average temperatures as had so far been predicted by computer simulations. Mason, who has been involved with the questions of global climate for nearly 20 years, is one of Britain's top meteorologists.

Mason bases his statements on improved computer simulations. The great depths of the earth's oceans had until now not been taken into consideration in the calculations, because we had no knowledge of how great the bonding power of carbon dioxide at various water depths really is.

It has meanwhile become known that there are powerful deep currents between the Atlantic and the Pacific Oceans which could bring about a comparatively fast distribution of the carbon dioxide picked up from the atmosphere. Rough calculations suggest that contrary to earlier assumptions the oceans can absorb almost twice as much industrially released carbon dioxide.

In the end, this observation is in fact not comforting, but it does push the time period for global warming far into the next century. Thus, more time remains for the industrialized nations to substantially reduce carbon dioxide emissions.

Great Britain sees Germany's packaging regulations in particular as a warning example. They have led to increased waste export and not to actual waste reduction. In the United Kingdom, they are pursuing another way to

encourage and support industry in developing and offering environmentally friendlier products and services.

Funds are being made available for this purpose in the 1994 British budget. Clive Brewer, the British government's Director for Environmental Protection, refers to the growing world market for environmental protection technologies which for 1992 is estimated at about \$210 billion. In 1992, Great Britain exported about \$800 million worth of products in this market alone. Brewer expects that this share will show high growth rates in the coming years. In the meantime, British industry has already started to switch over to products and production processes to minimize carbon dioxide emissions and other environmental pollution within Great Britain, [something] which is also occurring in the other countries in the European Community. London emphasized, however, that this is happening first and foremost on a voluntary basis and that the government itself hardly needs to reach for specific laws or regulations.

Dr. Arun Watts, Technical Director of the ICI [Imperial Chemical Industries] Plastics Division, offers as an example the production of plastic foam from polyurethanes using newer methods of production. A non-volatile isocyanate is used as well as new catalysts which undergo polymerization at low temperatures.

Analyses of the environmental influences in production, manufacturing and reprocessing were done before coming up with an ecologically defensible product. This led to a reduction in all environmental pollution of about 30 percent. It is hoped that a reduction of around 50 percent can be reached by 1995. It was taken into consideration that plastic foam can be reprocessed by means of a chemical conversion.

A high quality polyalcohol is recovered which can be used for the production of a plastic foam with hard plasticity. This plastic foam can then be used for thermal insulation in buildings or in refrigerators or freezers. Since the energy content of the new polyurethane corresponds approximately to that of coal, ICI thinks it makes more sense to burn the material when it is no longer of use than to dispose of it [as waste in a landfill]. According to studies by Dr. Norman Grant, Director of Earth Observation and Science at British Aerospace, Space Division, the measurement data necessary for active environmental protection can be obtained using modern methods of spectroscopy combined with radar and other millimeter wavelength frequency ranges. British Aerospace could make its extensive experience in this area available and thereby substantially ease the accumulation of precise measurement data.

This is also true for moisture measurements and the determination of various gases, which are necessary before industrial methods of production can be changed over to more ecological methods. This can extend to being able to make an immediate determination of the precise moisture and water content of foods: no determination process with this level of precision and operating in real time has been available until now, as Grant said.

For example, radiometric microwave analyses can be made without touching or destroying [the object of measurement]

in the range between 100 to 200 ppm in the frequency range between 140 to 250 gigahertz and up to 30 ppb in the frequencies between 22 and 140 gigahertz. This space flight technology of measurement is tested and, according to Grant, ready to be put into use in industry at a feasible cost.

Additional know-how comes from the English atomic industry: within the framework of privatization and restructuring of the AEA (Atomic Energy Authority), a (semi-private) National Environmental Technology Center in Cullham was established and a group of experts particularly experienced in planning work and monitoring technology was gathered.

In addition to clients from industry, the center primarily advises the EU Commission on environmental protection with regard to the RDT (research, technology, development) activities which are a part of the Maastricht Treaty. Part of these managerial functions are thus paid for by Brussels out of the comprehensive 12 billion ECU budget for 1994 to 1998.

Computerized monitoring systems recording [data for] all of England come from military observations which are prepared and offered for environmental work by Hunting

Engineering in Reddingswood/Bedford. The firm supposedly has at its disposal an extremely precise set of maps. It was put together after 1984 together with meteorological data and stations for measuring radiation.

It is organized in such a manner that government offices and the public can be kept continually informed about all changes in radioactive readings, Kevan F. Daykin, Director of Information Systems, emphasized. Unfortunately, there is at this time no possibility of connecting the German government's monitoring network.

Waste Management International Services, Ltd., works with the broad range of methods and techniques for environmental protection and with the clean-up of the soil and the waters. The company helps businesses and governmental operations to choose what is most suitable from all that is available in various environmental techniques.

[Waste Management] has a great deal of experience in cleaning up contaminated soil and advised Exxon, among others, in the removal of the destructive oil [spillage] after the Exxon Valdez accident in Alaska. [Waste Management] is one example that practical environmental protection can also be a profitable business of international proportions.

Nordics Fear EU To Affect Environment Negatively

94WN0277A Helsinki HUFVUDSTADSBLADET in Swedish 4 May 94 p 7

[Article: "Nordic Conservationists Agree: EU Membership Is Bad for Environment"]

[Text] (FNB)—The unanimous opinion among conservation organizations in Finland, Norway, and Sweden regarding the environmental impact of joining the European Union [EU] is that EU membership will have a negative effect on nature and the environment.

They made their report following a joint meeting in Stockholm on Tuesday [4 May], but they emphasized one thing:

"We are not taking a stand on membership and the union as a whole; we are looking at it solely from the standpoint of the environment and nature."

Dag Hareide, chairman of the Norwegian Conservation Association, felt that all democratic environmental organizations—meaning that he was excluding Greenpeace and the WWF [World Wildlife Fund]—had come to the same conclusion regarding membership.

He conveyed their message in five points:

1. The union weakens democracy. Because the principle of public access to official records is not upheld, openness, local control, and democracy are restricted and reduced.
2. There are areas where environmental standards will be made worse by membership. In the EU, rules on competition are more important than environmental concerns.
3. The union will administer natural resources. Authority over fishing, which is important in Norway, and agriculture will eventually be assumed by the union.
4. The international environmental movement feels that the rich part of the world should not increase its growth. But the union was established to do precisely that.

"We are not opposed to growth nationally, but the four freedoms will bring a drastic increase in the volume of transportation, for example," Hareide added.

5. Internationally binding cooperation should be positive, but joining a union in which 6 percent of the world's richest are placed in opposition to the other 94 percent will weaken the Nordic region's international solidarity, he said.

Finnish Demands

The board of directors of the Finnish Society for the Conservation of Nature decided in January that it would neither approve nor disapprove of the union, but information secretary Tuula Varis explained that the society had nevertheless taken a stand.

"That stand is more negative than positive," she said, "and society has also made demands which it feels must be met."

Among other things, it says that before the referendum is held, the Finnish Government must say what will and will not be public information in the future and provide guarantees that Finland will be allowed to have as strict an environmental policy as it wants even as a member of the EU.

She said: "The EU's environmental problems have increased steadily even though Brussels has issued over 100 environmental decrees."

Divided Society

Tor Traasdahl, secretary general of Norway's Future in Our Hands organization, was afraid that the EU would strengthen the trend toward a divided society.

"There are going to be many more poor people there but also more millionaires," he said. What he did not welcome was the Americanization of Europe that is built into the plan for union.

Charles Berkow of Friends of the Earth was worried that after joining the union, Sweden and Norway would lose their position as leaders and no longer be able to influence the rest of the world on environmental issues.

Ulf von Sydow, chairman of the Swedish Society for the Conservation of Nature, agreed that the possibility of exercising influence might be radically impaired, and Dag Hareide maintained that the EU was not a good organization for the environment.

"It does not solve environmental problems; instead, it creates them," he said.

Von Sydow claimed, and Hareide agreed, that Sweden and Norway had lost their position as leaders in environmental policy in recent years.

"We have pursued a cowardly policy on the pretext of adapting to the EU," von Sydow said.

"The same is true in Norway, where the Brundtland government is also pursuing a policy of adaptation."

But when it came to saying who pushes environmental issues in the world today, they had to admit that if anybody does, it is still Norway and Sweden.

China, Japan To Cooperate in Breeding Nearly Extinct Birds

OW0806223694 Beijing XINHUA Domestic Service in Chinese 0712 GMT 8 Jun 94

[By reporter Huang Fengzhen (7806 7685 3791)]

[Text] Tokyo, 8 Jun (XINHUA)—A delegation from the Chinese Ministry of Forestry headed by Forestry Minister Xu Youfang held talks on 7 June with a group of officials from the Japanese Environment Agency headed by the Agency's director general, Toshiko Hamayotsu. The two sides reached a consensus on cooperation in the protection of ibises, and signed a summary of talks on cooperation in the protection of ibises.

The summary of talks says: "The Chinese Ministry of Forestry and the Japanese Environmental Agency realize

that the ibis is one of the bird species which is most near extinction, and to protect ibises and rescue them from the crisis of extinction is a problem for the Chinese people and the Japanese people to solve together." The summary says: To further strengthen cooperation between the two countries in the protection of ibises, the two sides have reached a consensus on the measures which could be adopted within the limits of the laws and regulations of their respective countries and their financial resources. The summary says: To support the Japanese side in the artificial breeding of ibises during the period of cooperation, the Chinese side will lend to the Japanese side a pair of healthy, reproductive ibises which are currently in the hands of the China Wild Life Protection Association. The birds will be loaned for a period of less than three years and be used in breeding and joint research. The Chinese side shall send the pair of ibises to Japan before 30 September 1994, and the Japanese side shall return the pair to China before October 1997.

The pair of birds are loaned for exclusive use by Japanese experts in breeding research. If the Japanese side extends an invitation, the Chinese side will consider sending experts to Japan to participate in the research.

Xu Youfang and his party arrived in Japan on 5 June on an eight-day good-will visit at the invitation of the Japanese Ministry of Agriculture, Forestry and Fisheries. During their visit in Japan, Xu Youfang and his party have held talks with Japanese Agriculture, Forestry, and Fisheries Minister Mutsuki Sato and Environment Agency Director General Toshiko Hamayotsu. They have also paid courtesy calls on Japanese upper house speaker Bunbe Hara and former Japanese Prime Minister Morihiro Hosokawa.

States Shun Baltic Sea Pollution Issue

94WNO3084 Moscow MOSKOVSKIYE NOVOSTI
in Russian No 22, 29 May 94-5 Jun 94 p B11

[Article by Vladimir Umnov under the heading "Expert Opinion": "Will the Baltic Sea Become a Sea of Mustard Gas?"]

[Text] Seawater is corroding chemical bombs that were dumped in the Baltic Sea. Sometime in 1995-97 experts that the bomb and shell casings will come unsealed on a massive scale. What could the result be?

The example was set by Germany, which first dumped its chemical munitions in the Baltic Sea at the end of the World War II.

Yesterday

Between 1946 and early 1948 the Germans' "initiative" was followed up by the Soviet Union and Great Britain. According to current information, a total of 302,875 metric tons of chemical munitions and chemical-filled containers have been dumped in the Baltic Sea.

Of these, 35,000 metric tons were German "trophy" dumped by the USSR. All in all, the USSR dumped 12 percent of the total quantity of toxins thus disposed of in two areas—70 miles southwest of Liepaja and in the vicinity of Bornholm Island. The materials were scattered widely, dumped overboard while the ships were under way.

The English filled old ships with munitions, in some cases even encasing them in cement. There are now more than 40 such ships on the sea floor not far from Sweden. At the end, England dumped approximately 112,000 metric tons of German munitions and 120,000 metric tons of their own outdated chemicals.

No one is able to say what the current conditions of these munitions is.

Today

No specific research into this matter has yet been conducted, so we must rely solely on indirect data. The chemicals lie at an average depth of 100 meters, with a year-round temperature of 2-4 degrees Celsius—forming an ideal storage vault. From the standpoint of corrosion, the Baltic Sea is not the saltiest sea in the world. And bear in mind that not all the shells will come unsealed at the same time.

On the other hand, even under these conditions the casings should already be 75-90 percent gone. That means that in the 1995-97 period we should expect a major commotion of the casings. The Baltic is a virtually land-locked sea, with total water exchange occurring only once every 25 years. And the amount of chemical agents that have been dumped in it are more than six times enough to kill every living thing in it.

There have been many cases of fishermen getting burned while attempting to free a shell or canister containing a chemical substance from their nets with their bare hands, but such cases are always kept very quiet. The English are maintaining an Olympian aloofness, even though they dumped a much larger quantity of chemical weapons than we did. It is simply not in government interests to focus attention on this issue, or else they may have to clean up the sea floor.

Tomorrow

There is no single country that can afford that "luxury." Such an operation would take 20-25 years, and for that reason the whole exercise would be pointless anyway.

From a legal standpoint, this type of operation may be carried out in neutral waters only with the consent of all the affected states, and only on the basis of a state guarantee. Otherwise, in the event of accidents, for example, shell resurfacing, no one would bear responsibility. Only a state can serve as a guarantor of safety.

Most importantly, the scientific dispute has not yet been resolved: is there any need to worry about this at all? Some claim that the chemical agents have already become neutralized. On the other hand, just recently Poland experienced a massive fish kill, and traces of mustard gas were discovered in the fish, which had apparently been swimming by close to munitions somewhere.

International Expedition Studies Baltic Sea Ecological Situation

94WN0308B Moscow MOSKOVSKIYE NOVOSTI in Russian No 22, 29 May 94-5 Jun 94 p B11

[Article by Arkadiy Sosnov, MOSKOVSKIYE NOVOSTI staff correspondent, under the heading "Project": "Stranded Expedition"]

[Text] Russia is preparing to send an expedition to the Baltic Sea "with the objective of sampling toxic agents." Will other countries support it?

The plan for the first stage of studies under the Ekobaros [Ekologiya basseynov Rossii—Ecology of Russia's Basins] Program was announced at hearings held by the Russian Federation Supreme Soviet in 1992. It was proposed that in the summer of that year an expedition travel to the Baltic Sea aboard two hydrographic vessels. The expedition was expected to last 57 days: one week calibrating instruments at a test site, followed by demarcation of the boundaries of the undersea dump sites, analysis of the condition of flora and fauna in their vicinity, and collection of water and soil samples.

The program was developed by the Okeanotekhnik Association, which unites enterprises and organizations engaged in the study, development and protection of aquatic resources. The director of Okeanotekhnik, St. Petersburg Marine University Prof. Yuriy Semenov, hoped to raise several shells in order to study the condition of the metal and the "filling" in a laboratory.

But the cards were reshuffled by Russian bureaucracy. The navigation season came to an end, no money was allocated, the Navy divers were recalled by their commanders...

Now Semenov is pinning his hopes on a Helsinki Commission working group on chemical weapons dumped at sea, which held its first meeting in April 1993 in St. Petersburg. There other ideas held sway: first to clarify the who, what, when and where of the dumping. The participants proposed that Russia submit additional information on the dumping of Soviet chemical weapons after 1947. The same point was raised again in Vilnius in the fall of 1993.

At the third meeting, held in Copenhagen in January 1994, the need to conduct chemical toxicological monitoring near the dump sites was stated for the first time.

Since that has been acknowledged, says Yuriy Semenov, it means that the expedition is closer to becoming a reality. And Russia is better prepared for it than before, following field testing of equipment near Kaliningrad. Emphasis was placed on means of location and long-distance analysis, for example on a magnetometric system for locating submerged objects that was developed by the Radiofizik Design Bureau at St. Petersburg University. That system makes it possible to find metallic objects not just on the sea floor (which can be done with acoustic instruments as well) but also those that are buried a meter or two beneath the sea floor. The device is easy to use and sets up on deck instead of having to be towed behind a vessel...

Russia's contribution to the international expedition could be substantial: vessels and crews, equipment, and methodologists. But part of the equipment and technology must come from other Baltic countries. The research team will be international. The joint outfitting of the expedition will make it possible to take into consideration the participating countries' interests and reduce total expenditures, which will be approximately \$800,000 for the seagoing portion of the program, and \$1.2-1.4 million when the costs of equipment and lab analysis are added in.

Who could share the burden of such an expedition with us? Probably **Germany**: its representatives in the working group never forget whose country it was that manufactured the chemical weapons later dumped by the Allies. The same responsible attitude has been shown by Okeanotekhnik's business partners from the German industrial and financial group Bremer-Vulkan. The need for field research was noted in Germany's national report on chemical weapons.

Denmark needs guarantees of safe fishing and the absence of pollution in its marine environment, as the shells are located in busy commercial fishing areas, while the coast of Bornholm Island is one of the principal Danish resort areas.

And possibly **Finland**, which has traditionally been very interested in the ecological condition of the Baltic Sea and which possesses impressive research capability, which was demonstrated to meeting participants by Finnish companies.

As for Russia, what was initially a public or, if you will, a citizens' initiative by Semenov and his colleagues is now receiving backing at the governmental level, prompted by a desire to test unique equipment and methods, some taken from the arsenals of the military-industrial complex.

It is also possible that the Helsinki Commission group will hold off on making a recommendation regarding an international expedition until the picture is completely clear with regard to Soviet chemical weapons dumping after 1947. Nevertheless, an expedition along the lines of the one envisioned by Okeanotekhnik is realistic. It might be carried out by Russia based on an agreement with several of the countries affected or in conjunction with Western business circles on a commercial basis.

Reactions to Nuclear Tests in S. Pacific Noted

BR2306111294 Paris LE MONDE in French 22 Jun 94 p 6

[Sylvie Lepage report: "The South Pacific and French Nuclear Testing"]

[Text] Suva—Although the relations between France and the countries of the South Pacific have improved thanks to the moratorium on nuclear testing declared by the president of the Republic, the recurring debate on whether or not it is necessary to restart explosions and the possibility of a decision running counter to that made by Francois Mitterrand after the next presidential election still give the countries of Oceania some cause for concern. However, it is uncertain whether all the governments of this zone will react with the same virulence.

Jeremia Tabai, general secretary of the South Pacific Forum [SPF] based in Suva said: "Relations between France and the countries of the SPF have taken a turn for the better. However, any restarting of testing at Mururoa [French-owned South Pacific atoll and nuclear test site] would be a considerable step backward. France has always maintained that the tests do not endanger anyone, but we doubt this. The long-term consequences are still not known and people fear them."

For many Polynesians and Melanesians who catch their food in the sea, it is unbearable to think that fish could be poisoned and reefs destroyed. There is little point in publishing report after report proving that there are no leaks or pollution. They will not change convictions that are widely held among the peoples of the South Pacific. Cold reasoning and Cartesian logic do not work against an emotional discourse. A French diplomat pointed out to us that the people of Oceania consider nuclear testing to be "rape and sacrilege."

When the United States transferred their nuclear tests from the Pacific to Nevada, France was perceived as being the only country that was active outside its own region, even though the tests were being carried out on French soil. Don McKinnon, New Zealand's conservative foreign minister, asked us: "If these tests are really not at all dangerous, why are they not performed closer to mainland France?"

New Zealand Activism

New Zealand is one of the few countries to have a minister for disarmament, "a strange creature, no doubt," Doug Graham says of himself. He explained: "As a small country, we have never gone along with the idea that a few nuclear powers—previously five—could threaten the whole world and could have the power, if things went wrong, to bring about the apocalypse."

Mr. Graham recommends that sanctions be brought against countries which, like North Korea, refuse a complete inspection of their nuclear installations by the International Atomic Energy Agency [IAEA]. Everyone we spoke to agreed that the fact that new countries are looking to obtain the atom bomb in no way justifies the nuclear powers launching an arms-perfecting program implying a restart to testing.

This aversion is deeply-rooted in New Zealand. Former Labor Prime Minister David Lange (1984-1989) told us: "At a time when antinuclear demonstrations in Europe were confined just to left-wing movements, this tendency in New Zealand was much more widespread, to the extent that the government itself led the demonstrations. The fact that it sent one of its ministers, Paul Fraser, and two frigates to Mururoa to protest against atmospheric tests merely strengthened New Zealanders in their conviction."

This indignation is now shared by most neighboring countries. It is above all the opposition to nuclear testing that led to the creation of the Forum in 1971, an organization that aims to be essentially political, unlike the South Pacific Commission which was then still under the aegis of the colonial powers.

Four years later, New Zealand, Fiji, and Papua New Guinea managed to convince the United Nations to agree by a unanimous vote to pass a motion in favor of a denuclearized zone in the South Pacific. France and the United States abstained. In 1985, Wellington's efforts resulted in the denuclearization treaty being signed at Rarotonga, in the Cook Islands, by the 13 countries of the Forum, with the exception of Vanuatu which considered that the text of the treaty did not go far enough. The treaty specifically bans tests and the dumping of nuclear waste in the waters of the zone. Three protocols invited the nuclear powers to apply the provisions of the treaty in their territories situated in this region. These were rejected by France, which had just sunk the [Greenpeace protest ship] *Rainbow Warrior* in Auckland harbor, and by the United States, whose relations with New Zealand had been frosty since Wellington had banned nuclear weapon-carrying or nuclear-propelled vessels from entering its ports.

Despite the election of a new Conservative government in 1990, Wellington did not revoke the law of 1987 which enforced this ban. Jim Anderton, head of the opposition Alliance party, stated: "Their deputies would not allow it. It would be an unacceptable about-turn for the people. We are proud of the fact that our tiny country has been able to say no to the United States, even though our decision means that we are still excluded from ANZUS (the military pact between Australia, New Zealand, and the United States)."

Danger to the Environment

While there is no question of New Zealand going back on its antinuclear policy, France has nonetheless found greater flexibility in Fiji and Vanuatu since they changed governments. When Colonel Rabuka overthrew the predominantly Indian coalition government in 1987, Fiji lost the support of its main donors of aid—a gap that France rushed to fill. In 1989, Mr. Rabuka was awarded the Legion d'Honneur for services to the Lebanon...nine years after the event. Now the head of an elected government, Sitiveni Rabuka is calling on France, "in accordance with the wishes of the people of the Pacific, not to restart testing."

However, as Steven Ratuva, director of the Fijian antinuclear group, points out: "Rabuka is a soldier by training and, given his links with France, it is highly unlikely that the Fijian Government would overly pressurize Paris were testing to restart." Perhaps that explains why Sir Ratu Kamisese Mara, who, in 1985, gave a speech at the UN General Assembly condemning French nuclear tests on Mururoa, as Fijian president today refuses to grant us an interview on this specific subject. This is the same man who, on an visit to Paris in 1988, received an aid package five times greater than the one awarded in 1987. Issue 17 of the *JOURNAL OF PACIFIC STUDIES* published by the South Pacific University (SPU) in Suva wonders whether it is any coincidence that, for the following two years, the Forum toned down its criticisms of France.

In Vanuatu, the position of Maxime Carlot, elected in 1991, differs considerably from that taken by former Prime Minister Walter Lini who, since 1980 (when the French-British

condominium of the New Hebrides gained its independence), had taken every opportunity to condemn Paris, especially on the subject of nuclear testing. Since the French-speaking group came to power, Vanuatu has been something of a bridgehead between mainland France and the countries of the South Pacific, and Mr. Carlot has taken care not to cause offense to any of the parties.

He told us: "France must take into account the wishes of the independent countries of the South Pacific. We, like them, believe that nuclear testing represents a danger for the environment. If France can find other solutions to perfect

[its weapon design], then all the better." "However, those who are interested in Mururoa must also take an interest in the world balance, and my government will always be on the side of the free world."

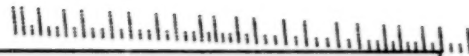
However, here as elsewhere, everyone would be greatly relieved if France could banish the doubts hanging over the South Pacific once and for all. The credit it has gained since the then-Prime Minister Michel Rocard negotiated the Matignon Agreements on New Caledonia in 1988 by the implementation of a cooperation policy with these territories and the moratorium, will then be unlimited.

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